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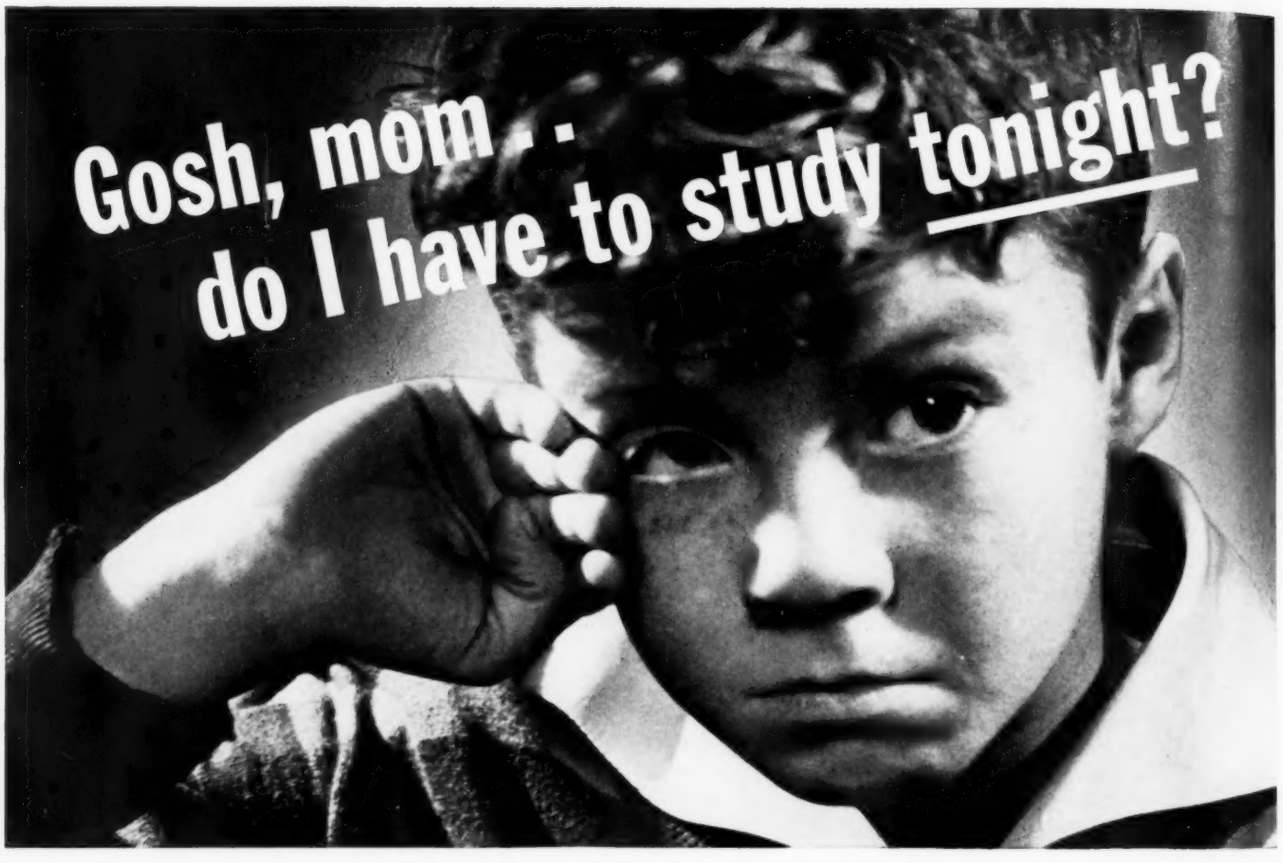
THE HEALTH MAGAZINE

HYGEIA

The care of BABY'S SKIN

page 466

1940 • 25c



If your child looks and acts like this . . . better have his eyes examined . . . then try this . . .

1 Be sure that all the lamp bulbs in your home are the right size to provide enough light for easy seeing. When you read or study, you need a total of at least 100 watts, properly shaded. Better check your bulbs today.

2 Be sure the light bulbs you use are made by General Electric. Then you'll be sure to have the kind *made to Stay Brighter Longer!*

G-E MAZDA LAMPS

GENERAL ELECTRIC

BABIES SUPERVISED BY PHYSICIANS ARE BETTER BABIES

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TAURUS

FORECAST FOR JUNE

What do you know about your doctor? How did he get to be one? What are his experiences with patients, and how do they temper his judgments? How are the unfit students and young medicos weeded out?

This revealing article explains all these things and many others about the medical profession, and it will help you to understand many points about your doctor's mental and moral makeup. Written by Reginald Fitz, M.D., it is entitled "The Modern Doctor and What He Is Up To."

"Of all the skin diseases that a dermatologist treats, superfluous hair in women is one of the most important because of the self consciousness and mental depression which accompany this condition," so says Maurice J. Costello, M.D., who tells next month "How to Get Rid of Superfluous Hair."

Do you know what methods are harmless for the removal of excess hair, and what methods are known by the medical profession to be permanent? Here are truthful and dependable instructions for getting rid of those blemishing hairs that cause you so much worry.

Apoplexy, or cerebral hemorrhage, is the fifth disease in our series on the nine most frequent causes of death. Persons who experience it (often erroneously called "a stroke") appear to have been suddenly struck down. It seems mysterious; it is apparently without any predisposing cause. How does it happen, then? Read Dr. Carl W. Apfelbach's interpretation of what occurs in "Deadly Disease Number 5: Cerebral Hemorrhage."

Also on schedule for the June issue are announcements of the winners of the Picture of Health 8500 photo contest; "Diaper Data" by William I. Fishbein, M.D.; "Speech Defects of Childhood" by James Sonnett Greene, M.D., and "Antidotes for Air Sickness" by Sibyl Winser Johnston.

HYGEIA

THE HEALTH MAGAZINE

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CONTENTS FOR MAY

COVER ..... Torkel Korling

IF THE SHOE FITS — An Editorial 391

NOISE AND NERVES ..... Rose Zeligs, Ed.D. 392

HOW THE SURGEON SEWS ..... Esther G. Price 396

THE AGE OF MIRACLES — A Poem ..... S. E. Kiser 399

PHOTOGRAPHER IN BED ..... Lansing T. Carpenter 400

THE YOUNGER GENERATION STEPS OUT ..... Myrtle Meyer Eldred 404

MOTHERS' HELPERS ..... Ethel S. Beer 407

HEMORRHOIDS ..... Harold Laufman, M.D. 410

DEADLY DISEASE NUMBER 4: INFLAMMATION OF THE KIDNEYS ..... M. Herbert Barker, M.D. 412

A FIRM HAND ..... Russell V. Burkhard, M.S. 415

MENTAL HYGIENE IN THE CLASSROOM ..... Frank Astor, Ph.D. 417

CALIFORNIA "RENOVATES" THE DUST-BOWLER ..... Esther A. Canter 420

SAVING LIVES WITH MOTHERS' MILK 424

WONDER STORIES OF THE HUMAN MACHINE: VIII ..... George A. Skinner, M.D. 429

DO YOU KNOW POISON IVY? ..... Elizabeth Chavannes 433

2,000,000 AWAY FROM HOME ..... Ross L. Allen, Dr.P.H. 435

FOODS AND NUTRITION

- Noodles, Macaroni, Spaghetti and Similar Products 441
- Mushrooms for Flavor ..... Harriet Morgan Fyler, Ph.D. 444
- Quick-Frozen Foods Show Little Nutritional Loss 448

QUESTIONS AND ANSWERS 450

BOOKS ON HEALTH 456

MEDICINE IN THE NEWS — Radio Announcement 459

CHILD CARE

- "Out of the Mouths of Babes" ..... Mary Partridge Becker 463
- The Care of Baby's Skin ..... William I. Fishbein, M.D. 466

TEACHING HEALTH

- The Friendly Teacher ..... J. Mace Andress, Ph.D. 470
- Teaching with a Purpose ..... Charles R. Foster, Ed.D. 472
- A Study of Water ..... Effie F. Knowlton 474
- A Lunch Project That Works ..... Ada M. Cockefair 476

MEDICAL NEWS OF THE MONTH 480

HYGEIA, The Health Magazine, is published monthly by the American Medical Association, 535 N. Dearborn Street, Chicago, Ill. Yearly subscription price, $2.50; for foreign postage add 75 cents. Single copies, 25 cents. Volume 18, Number 5. Entered as second-class matter March 21, 1923, at the postoffice at Chicago, Ill., under the Acts of March 3, 1879. Acceptance for mailing at special rate of postage provided for in Section 1,103 Act of October 3, 1917, authorized March 21, 1923. Printed in U. S. A.

Unsolicited manuscripts will be considered by the Editor but must be accompanied by a stamped self addressed envelop to insure return if rejected. Manuscripts should be typewritten, double-spaced, and the original, not the carbon copy submitted. All rights reserved.

a well-shaped head

Baby needs plenty of Vitamin D, if he is to build a well-shaped head. It's better not to stop cod liver oil in summer. Otherwise the taste has to be acquired all over again in fall.

Your baby needs this special help in summer, too!

Because dust, smoke, fog, window glass, clothing, clouds, rain may shut out 50% to 75% of the sun's Vitamin D rays even now, give your baby extra Vitamin D (Squibb Cod Liver Oil) every day all summer long.

a fine, full chest

Further reasons for giving Squibb Cod Liver Oil month in, month out: it helps build a fine, full chest; straight legs and back; a sturdy frame.

Vitamins guarded! You get your money's worth!...When you insist on buying Squibb Cod Liver Oil for your baby, you get full value of the Vitamins A and D that you are paying for. Squibb Cod Liver Oil provides your baby with more than twice as many units of Vitamin A and three times as many units of Vitamin D as a cod liver oil which just complies with minimum requirements of the U. S. Pharmacopeia. You'll find it's an economy to buy Squibb's! Ask for it now—by name—at any drug store!... *The priceless ingredient of every product is the honor and integrity of its maker*

SQUIBB *Cod-Liver Oil*

LETTERS FROM *Readers*

Advice of Benjamin Franklin

To the Editor:

In Benjamin Franklin's Autobiography I came across his advice to parents in regard to inoculation against smallpox. Thinking your readers might find it of interest, I am quoting it.

"In 1736 I lost one of my sons, a fine boy of four years old, by the small-pox, taken in the common way. I long regretted him bitterly, and still regret that I had not given it to him by inoculation. This I mention for the sake of parents who omit that operation, of the supposition that they should never forgive themselves if a child died under it; my example showing that the regret may be the same either way, and, therefore, that the safer should be chosen."

Franklin, in all probability, would have approved measures for prevention of other diseases, as practiced now, if he were living at this time.

BERTHA SOLIS-COHEN

Philadelphia

Suggested Articles

To the Editor:

As a subscriber to your magazine I have found unlimited pleasure in the articles of which HYGEIA is composed and especially in reading the articles having to do with foot health.

As a podiatrist I fell that some mention should be made in HYGEIA in regard to the value (and aid) of podiatry as it is today. It has growing importance and advantage especially in the cases of the diabetic. The public should be informed that foot ailments which cannot be simply treated ought to be turned over to good orthopedic specialists who are anxious to educate their patients as well as the public. In a magazine such as HYGEIA an article or series of articles in regard to feet and the podiatrist will be of great importance and interest, for readers of such a health magazine anxiously look forward to such information.

There are too many suffering humans walking the streets continually, who are in great need of a podiatrist, but too few who can direct them to one due to the little knowledge of the benefits derived from chiropody treatments.

I am heartily sincere and would like a good rousing article or series to waken Mr. John Public.

Your satisfied subscriber,

HERBERT A. HEIMLICH

New York City

Editorial Policy

To the Editor:

After reading your editorial in the March [1939] issue on "Hygeia and Birth Control," I wish to commend you on the stand taken by you and your staff on this much controverted question.

For the past year we have subscribed to HYGEIA and have made use of your splendid magazine in our physiology and hygiene classes. Consequently, your magazine is read by many of our students.

As teachers of our youth it is necessary that we be mindful, not only of the physical health of our students, but also of their mental and moral health. It is reassuring that we can rely on your cooperation as evidenced by your sane and sound editorial policy.

THE REV. F. GERALD, O.S.B.
Headmaster, Marmion
Military Academy

Aurora, Ill.

Questions and Answers

To the Editor:

We have used HYGEIA in our classes for a number of years and always found every issue to be interesting and helpful. I personally feel that your Questions and Answers column is doing a great service to your subscribers.

D. V. SWARTZ, Principal,
Junior High School and
Elementary Grades

Sterling, Kan.

Ignorance or Worse

To the Editor:

In the British antivivisection publication, "New Life, a Magazine of Health and Nature Cure," for March 1940, page 10, a writer by the name of E. Douglas Hume supports the thesis that the safety and efficacy of drugs for man cannot be determined by experiments on animals and asserts that "one particular sulphonilamide [sic] caused the death of not less than 173 persons in America." The writer evidently refers to the infamous elixir of sulfanilamide, dispensed by Messengil. In that case the human deaths were not due to the sulfanilamide but to the diethylene glycol, used as a solvent. The toxic action of this glycol was well known, largely through experiments on animals. But physicians were not informed of the presence of this poison in such large quantity (73 per cent) in the Messengil elixir. This assertion by Mr. Hume is just another illustration of the usual disregard for truth by those who oppose modern medicine and one of the major aids in modern medical advance, animal experimentation.

A. J. CARLSON,
University of Chicago

Chicago

Saving Lives

To the Editor:

Your very interesting magazine HYGEIA has been coming to my home for two years now, and each issue has afforded our entire family much valuable health information. Several articles were most interesting and helpful. This is one magazine that should be in every home, for one article alone may save a life.

A. HIDALGO

Cranford, N. J.

"Going to the Hospital"

To the Editor:

Please pardon the postcard, but I just want to tell you how helpful I have found your article "Going to the Hospital?" in the March HYGEIA. Have cut it out so that I can loan it to several friends. It is well worth a year's subscription to the magazine!

ELIZABETH DOBBIN

New Rochelle, N. Y.

Permission Granted

To the Editor:

I would like to have your permission to have your article "It Was Only a Scratch" which appeared in the December issue of the *Reader's Digest*, printed in a pamphlet and placed in the hands of my students in classes in Home Hygiene and Care of the Sick.

I think it is an excellent article and one that will be a good addition to our class on first aid measures and safety measures in the home.

GRACE ALLENBACH,
Franklin County Chapter,
American Red Cross

Columbus, O.

Money's Worth

To the Editor:

Just received notice my subscription is expiring. Have certainly had my money's worth. It was a gift to daughter-in-law. I shall continue to read HYGEIA, but at the library, which is quite near. Your highly prized publication has helped me maintain good health, and now I am enjoying life in my seventieth year.

Goodby, and good health to you!

E. C. BARNES

Tacoma, Wash.

Complaint

To the Editor:

We already take HYGEIA in our office, but while we like it greatly we would like it better if you would print the M.D. after the heading of articles by M.D.'s. Also if, instead of the silly pictures on the cover you would print contents in a regular fashion like *The Journal* of the American Medical Association, with the same format each month.

Omit the moronic colored pictures. Make the magazine less ladylike.

ANONYMOUS

Although it is against our policy to print or answer anonymous letters, an exception is being made in this case.

We are always glad to have constructive criticism. Unfortunately, we can't please every one. So although we may not follow your suggestions, they do make us pause and view our handiwork with a more critical eye.

Who's Who IN HYGEIA

ESTHER A. CANTER, who writes of dusting off the dust-bowler on page 420 of this issue, is a school nurse in Banning, Calif., a beautiful mountain health resort near Palm Springs. But she has actively taken part in the state's campaign to make the migratory worker a safe citizen physically, as she followed him about in the capacity of state nurse. So Miss Canter knows the subject she writes about with the familiarity of close association.

She came from Indiana, where she had studied nursing and held a position in public health nursing in Indianapolis. But ever since touring the West with a Chatauqua group at the age of 18, she had longed to return, which she did three years ago, and took up with the dust-bowlers.

ROSS L. ALLEN, Dr.P.H. also has plenty of authority for what he says in his article "2,000,000 Away from Home" on page 435, for he is the Managing Executive of the American Camping Association. He has been dealing with children since 1928, when he first started teaching; he was an instructor in health and physical education at Washington Junior-Senior High School in Rochester, N. Y., where he remained until 1935. He then became Assistant Editor of the *Journal of Health and Physical Education* for two years, whence he came to the American Camping Association. Dr. Allen's article debates the question of "To camp, or not to camp! Which shall it be?" He regards it from the side of the parents, and he is father to two children, which makes it easier for him to understand their side; and he views the question from the side of experienced campers.

FRANK ASTOR, Ph.D., has for the last fourteen years been Director of the Parent and Child Guidance project sponsored by the National Child Welfare Association. During six of these years he was Liaison Officer between this organization and the Bureau of Child Guidance of the New York City Board of Education. At present, he is Director of the School Division of the Greater New York Fund. He has been principal of elementary, high school and normal training schools, and for years he has conducted courses for teachers on the principles of mental hygiene. He has lectured widely over the radio and before various associations, and has contributed articles to numerous professional periodicals. His present article is "Mental Hygiene in the Classroom" on page 417.

M. HERBERT BARKER, M.D., writes of the fourth most deadly disease, inflammation of the kidneys. He is Assistant Professor in cardio-renal-vascular diseases at Northwestern University School of Medicine, where he has lectured since 1929. He is also in charge of the Oxygen Research Laboratory there.

RUSSELL V. BURKHARD is principal of the F. A. Day Junior High School in Newtonville, Mass., and has pioneered in radio in education along the lines of pupil broadcasting. From a meager beginning several years ago, this phase of his program has grown to a point where it has been given considerable national recognition. His experience with children has been rather wide. He has held both teaching and administrative positions in the elementary and secondary levels, including eight years in the William Penn Charter School of Philadelphia. He is chairman of the public relations committee of the Massachusetts Teachers Federation and past president of the Newton Men's Educational Club, besides holding many other offices.

Harold M. Lambert

Who can foretell for what high cause
This darling of the gods was born?

—Andrew Marvell

© *The Home Book of Quotations*

If the Shoe Fits

MAN is an animal who walks on two feet. Evolutionists insist that man was once an animal that walked on four feet and that gradually he rose up on two feet in order that he might use his forefeet in defending himself. As a result, new stresses and strains developed in the body. The weight, which was formerly carried on four feet, was then carried on two feet. Balance had to be maintained by a wide variety of muscular actions which also involve pulls on the bones of the spine. The foot, which was once constructed for an animal that walked on four feet, began to change. Then shoes were invented to help protect the feet against many factors which might cause them damage.

It is not true to say that all children are born with good feet and that the feet gradually become worse as a result of the shoes that are worn. We know that the feet change according to the conditions of their use. Thus Frank R. Ober, who has prepared a special report on the subject for the Council on Physical Therapy of the American Medical Association, points out that normal feet may become abnormal as the result of illnesses, sedentary occupations or bad postures. When paved streets first began to come in, it was learned that horses' feet could not tolerate the use of paved city streets. The feet would become badly affected, but they would recover if the horse was sent to the country and placed in a soft pasture. A human foot may likewise be damaged by the uses to which it is put.

Custom and fashion decree the wearing of shoes. Unfortunately, custom and fashion also decree the wearing of a good many shoes which are exceedingly peculiar from the point of view of maintaining a useful and healthy foot. The fact that so many persons wear shoes means that it is not possible to fit every one individually with shoes, as people are fitted individually for other types of clothing. If the same attention were given to fitting shoes to the feet that is given to fitting false teeth into the mouth, a vast number of ills associated with the feet would be avoided. If even as much attention were given to the fitting of shoes as is given to the fitting of glasses for the eyes, the benefit to mankind would be considerable.

In his consideration, Ober points out that shoes in this country are constructed on standard lasts and that, of course, great numbers of feet do not conform to these standards. Indeed two pairs of shoes made on the same last will not feel the same on the same pair of feet. There are no two feet exactly alike even in the same person. Four hundred million pairs of shoes are manufactured in this country every year. It would probably be impossible to develop standards for fitting of shoes that would adequately control the manufacture and application of these 400 million pairs. The entire industry would be dislocated and disturbed so seriously that the costs would rise tremendously; it would soon be found that many persons could not purchase shoes. Therefore, the most that can be done apparently at this time is to educate people as to what is right in the fitting of a pair of shoes. These standards are simply defined.

A shoe must be long enough so that the end of the big toe is not against the toe end of the shoe. When a heavy weight is lifted, the foot increases in length. The shoe must not be so long that the foot will slide forward in the shoe. A shoe should be wide enough so that the toes will not be compressed at the sides or on top. However, the shoe must also be narrow enough to prevent wrinkling of the leather. If the shoe is too wide at the toe end, the foot will slide around and corns and calluses will form. If the shoe is so wide at the heel end that the foot slides around, the shoe will not be even approximately a good fit. There should be room enough in the shoe for a medium to a highly arched foot. If there is not room enough, the instep will be pushed downward, the foot will be elongated and the arch stretched.

The height of the heel should depend on the ability of the foot to bend. The heels should be high enough so that the foot will not turn and so that there will be no such strain on the calves of the leg as to cause pain and cramps. Neither should the heel be so high as to cause calluses to form on the balls of the feet.

Special attention is, of course, given to the shank of the shoe. The shank should fit the individual foot. Ober feels that a shank should be built in the shoe which can be raised or lowered, which will not break when bent or under a load and which will "stay put" when being fitted under the arch by being bent up or down according to the foot of the person on whom the shoe is being fitted.

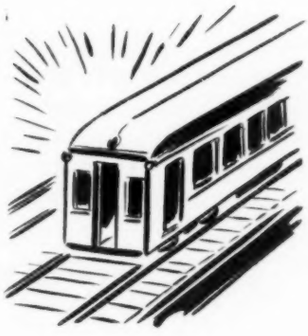
NOISE and

NOISE is becoming an ever greater menace to the physical and mental health of children and adults. Urban life, with its crowding, mechanical devices of all sorts, motor vehicles and factories, is harmfully affecting the health of the population. Those who can do so are seeking homes in the country, even though it entails some inconvenience and more traveling.

Although some noises cannot be avoided, a great deal could be eliminated through education and law enforcement. Persons who complain about noise are considered "cranky" by those who are not as susceptible, but medical research has shown that actual and often permanent harm results from exposure to noise. Experiments with newborn babies show that fear results from loud banging of any kind.

My first year of teaching I was sent out to a school in a poor district, near the railroads. Across the street from the school was a railroad switching yard. When the trains passed, it was difficult to hear what

NERVES



By ROSE ZELIGS

was being said in the classroom; but when trains were being switched back and forth in the yard, the roar and noise of the engines and whistles was deafening. Every time the switching began, all sounds in the schoolroom were drowned out. I had to devise special silent work for those periods. When I called on the children, I noticed that a number of them had hoarse, loud, rough voices. Instead of speaking in well modulated voices, they shrieked and yelled at any one who spoke to them. I soon learned that those children lived right near the railroads and not only had to shriek in their homes because of the din and noise of trains but also because their hearing had been impaired by the continuous noise.

McCord, Teal and Witheridge in *The Journal* of the American Medical Association of May 7, 1938, give a summary of the studies made on noise. It is called "Noise and Its Effect on Human Beings."

The following table copied from their report shows various degrees of noise:

RELATION OF CERTAIN SOUNDS TO THE THRESHOLD OF HEARING

Average Decibels	*Source or Description of Sound*
130	Threshold of painful sounds; limit of ear's endurance
120	Threshold of feeling (varies with frequency)
115	Airplane motor (1,600 revolutions per minute) 18 feet from propeller
110	Steel plate hammered by four men, 2 feet
100	Loud automobile horn, 10 feet
90	Pneumatic drill, 10 feet
85	Very heavy street traffic along elevated line
80	Street car crossing tracks
80	Police whistle, 15 feet
80	Very loud radio music in the home
75	Heavy street traffic
75	Snow scraping and shoveling, 15 feet
70	Interior of street car
70	Loud peal of thunder (1 to 30 miles)
65	Usual loudness of radio music in the home
60	Ordinary conversation, 3 feet
55	Speech in a small auditorium
50	Conversational voice, 12 feet
45	Speech in a large auditorium
45	Near outlet of ventilating duct in high school auditorium ("very noisy")
40	Center of New York, quietest time of night
35	Loud fan noise in theater
35	Soft radio music in the home
30	Ticking of watch, 3 feet
30	Quiet street; no traffic
20	Whisper, 4 feet
15	Quiet fan noise in theater
10	Rustle of leaves in gentle breeze
8	Near outlet of ventilating duct in talking picture studio (planned control of noise)
0	Threshold of hearing faintest audible sound

They report that noise results in neurosis, loss of sleep, excessive fatigue and in emotional disturbances, in addition to impaired hearing. We all know that what is music to one may be noise to another, for individuals differ widely in taste and sensitivity to noise. McCord states that, "There is both practical and experimental evidence that noise has been responsible for impaired hearing, fatigue, neuroses, increased blood pressure, and decreased working and mental efficiencies. Experience indicates that a noise level of 90 decibels or higher is definitely harmful to the human ear. Exposure to prolonged noises of lower level . . . is also harmful." Experiments were made by various persons on cats, guinea pigs, pigeons, mice and dogs. These animals were subjected

to noises people have to endure in industry. It was found that the general health and hearing apparatus of the animals were impaired, and some of the animals even died from the effects of the noise.

In both man and animals, nerve deafness results from long exposure to noise. "Very loud, sudden noises, explosions or excessive pressure changes are dangerous, particularly to the tympanic membrane or the bony structure of the middle ear." It was found that policemen and taxi drivers are often affected with deafness because of their work in traffic.

Sometimes we believe that after we get used to noise it has no harmful effect. Even if we become unconscious of noise, it is leaving its mark on our health and efficiency. Studies showed an increase in output with a decrease in noise. McCord reports a study by Obata in which he tested children and adults for efficiency in adding and in marking out certain letters. He found that even low noises and especially music reduced their working speed. Discontinuous, irregular noise was most disturbing to efficiency. A decrease of noise in offices resulted in tremendous improvements in health, efficiency and accuracy in memory of office workers.

Specific effects of noise on health include increase in intracranial pressure, pulse rate, blood pressure, irregularities in heart rhythm, nervous indigestion and nervous fatigue. McCord states that, "Long continued exposure to annoying or fatiguing sounds may soon lead to a neurasthenic or psychasthenic state. The nervous system has been found to be of a rhythmic nature, and as a result it responds more readily to rhythmic than to irregular stimuli."

We know that much noise in the home, school and community could be avoided through better planning, education, laws and their enforcement.

We have entirely too much noise in the home. In many homes radios are continually going at full force. People talk, read and play bridge, and children try to study with the radio going. Radios should be turned on only when people are listening to them. People who have other things to do should work in a different room.

When children are sleeping, they should not be disturbed by music, loud talking, telephone conversations, slamming of doors, banging of silverware or dishes or any other kind of noise. I have often heard mothers say that their children are disturbed by nothing when they sleep. Experiments have proved that even though people do not know it, they are affected by noise while sleeping.

One of the advantages of eating at home is the possibility of having a quiet dining room. In many restaurants the noise of people coming and going, of waitresses banging dishes and

Parents may say that their child is not disturbed by anything when asleep; but experiments have proved that whether they know it or not, people—both old and young—are affected by noise while sleeping.

silverware, of loud music machines and talking interfere with people's digestion. At home, babies should be fed and put in another room or put to bed before adults have their dinner. In order to avoid noise made by children at play and to give them privacy when they study or sleep, it is important to have a separate room for them. It is better to have more space even if a sacrifice has to be made to beauty or modern decorations.

Apartment buildings where space is at a premium are no places for children or adults. Noise is constantly emanating from crowded apartments. Radios are playing, people are talking and laughing, babies are crying while maids are banging dishes and silverware. Telephones ring at all times, alarm clocks awaken the wrong persons, while electric sweepers and the slamming of doors add to the general noise of the environment.

Especially in urban sections, outside noises are many and confusing. Buses and trucks roll down the streets and send vibrations to the buildings and their occupants. Street cars and elevated railways rumble along while trains pierce the air with their sharp, shrill whistles. But most annoying and most unnecessary are the sudden and prolonged blowing of automobile horns. Some persons seem to have no regard for the sleeping mortals whom they startle into wakefulness for the rest of the night. A glance at the accompanying table will show how loud an automobile horn is in relation to other sounds. Then we have sounds of auto and police radios at all times of the day; while in the early morning we are awakened by the yelling of garbage collectors as they call to each other amidst the cans rattling on the sidewalks. During the day and sometimes even late at night children yell on the streets as they play or call to their parents. Peddlers, umbrella men and ice cream men are among those who call their wares. And in the good old summertime, with the fresh air comes the sound of family activities from neighboring apartments, together with the noise of their radios.

Those who happen to live near schools, social centers or churches hear special noises of social parties, band music, singing, cheers at sport events and the ringing of all kinds of bells at all hours. Open cafes and miniature golf courses may crop out in any section and by the shrieks and laughter act as a menace to the peace of the neighborhood.

In hospitals, too, patients suffer from the noise and bustle going on all around. Even those in private rooms are disturbed.

Schools should make every effort to permit children to work in a quiet environment. Narrow halls and crowded classrooms and poor arrangement of rooms permit singing, orchestra practice, workshop noises and sounds from the playground to interfere with classroom activity.

Much can be done to prevent the making of noises. We know that during winter, because our windows are closed, we hear much less noise. Air conditioning requires the closing of windows and thereby shuts out about 50 per cent of outside noises.

Through education and strict laws we can eliminate a great deal of unnecessary noise, and by the use of scientific methods and materials we can reduce noise in industry and in other places.

In some cities an automobile horn is used only to avert an accident; if it is blown at other times, the driver is subject to arrest. Most cities have an antinoise law which specifies definitely that loud noises, music, the blowing of automobile horns except to avoid accidents or any other sounds that disturb the peace of the neighborhood are definitely forbidden. But the difficulty is that in most cities the law is not enforced. A person who fails to put on a parking light even in a light street may be fined, while one who wakes up an entire neighborhood in the middle of the night by the terrific sounding of his automobile horn receives no punishment from the court. So, too, for loud music and other disturbances of the peace. A campaign in home and school and strict enforcement of the law by the police would eliminate many unnecessary and harmful noises.

In industry, noise can be cut down by the use of well balanced parts in machinery, by lubricating the machines and keeping them in soundproof rooms. Noise can also be reduced in home, school and industry by the use of sound absorptive material in walls, ceilings or floors and by the use of noiseless office equipment. Soft soled shoes, straw, felt or rubber mats, special chairs and platforms mounted on springs are of some help, as are also wax, oil-soaked cotton or soft rubber ear defenders. In schools, loud and rasping bells should be cut down and eliminated wherever possible. In the school lunchroom silverware and dishes should be handled quietly.

Only by realizing and taking action to prevent the genuine and widespread injury that is now resulting from a multitude of noises will we eliminate many of them and maintain more peace, better health and stronger nerves.

By ESTHER G. PRICE

How the Surgeon Sews

MEN are said to be clumsy with a needle and thread. But in the operating rooms of almost any hospital you will find men sewing in a way that would make grandmother's eyes bulge out.

Skilled needle work is as important in the surgeon's battle for health as is dexterity with the knife. His needles and thread differ, often remarkably, from those grandmother used; but to complete any operation successfully the surgeon must know all her knots and stitches and more besides. He must also know her tricks of handling different materials. Skin, fat and muscle are as unlike in texture as silk, wool and leather. Fat, like loosely woven wool, is difficult to sew on. The stitches tend to pull out—one reason surgeons dislike to operate on fat patients. You wouldn't sew on silk with a shoemaker's needle or with coarse linen thread. The surgeon's needles and thread are carefully sized to suit the tissue in question.

Perhaps you have held your breath while the doctor sewed up a mean cut in your arm or leg. Such skin stitches are mere child's play. It is the internal stitches deep in vital organs which really count—stitches where blood vessels and nerves are involved, and there is scarcely enough material to bring edge to edge without violating the surgeon's first commandment: *Don't stretch tissue.*

Recently I spent a morning in the amphitheaters on the operating floor of a large metropolitan hospital. In one room I saw Dr. B. drill holes like eyelets in the ends of a fractured bone; then, with a needle much larger than a shoemaker's, pull a thread made from the tendon of a kangaroo's tail through the eyelets and knot the ends carefully with firm square knots. That bit of sewing will hold the broken bones together till new bone cells span the fracture.

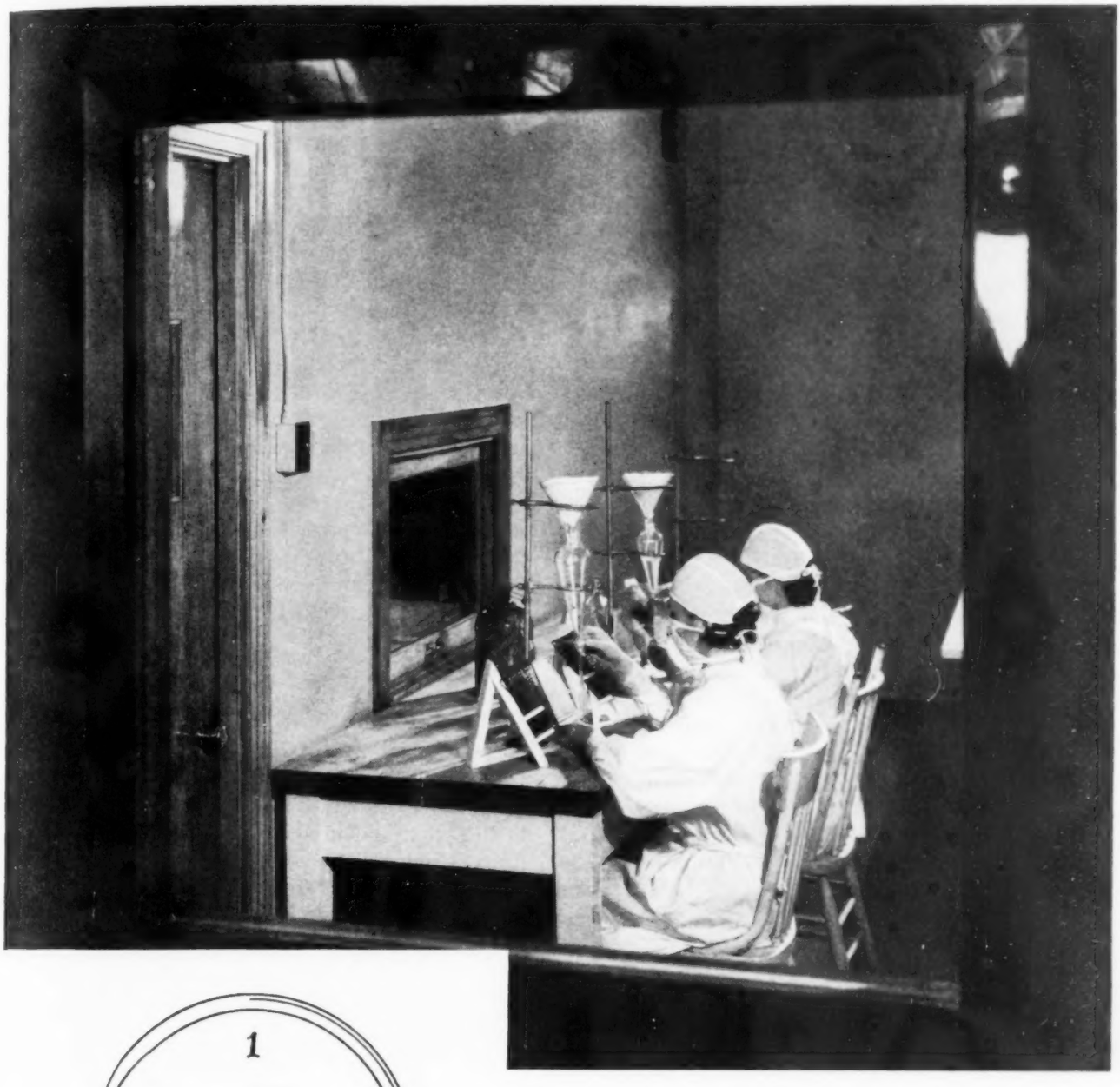
In the next operating room the eye surgeon had just removed a cataract from a woman's eye with a few deft strokes of a tiny knife. We think of that as the operation. But actually the operation has only begun. Lack of precision now might cause permanent blindness. The nurse passes the surgeon a needle shaped like a half moon which is held in a tiny needle holder, an eyeless needle already threaded with silken strands three times as fine as any the dressmaker uses. The thread these days is clamped in at the factory, so there is no double-backed thread to pull through such fine human tissues.

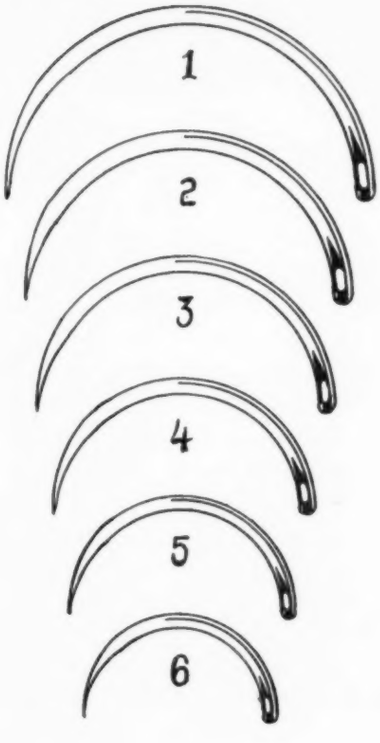
With gloved fingers the surgeon guides the needle into the white of the eye with the needle-holder, and as soon as the point reappears, he releases the holder, grasps the point with a small clamp and pulls the needle through. Then he ties that stitch off with a nonslip knot and clips the ends. Then on to another stitch, a centimeter away.

Walking down the corridor to another operating room, I found another doctor putting a "purse-string suture" into the stump of an appendix, with catgut as strong as heavy linen thread. Next he proceeded to one of the most important parts of surgical sewing: closing the abdomen in layers. Your abdominal wall is made of several layers. Each layer has a different texture, and in closing a wound each layer must be matched to the same layer on the opposite side of the wound. This matching of tissue, edge to edge, calls for a special kind of sewing. Edges must be brought together closely but without too much tension. In the abdomen, allowance must be made for pressure and changes in tension exerted on the stitches during the processes of digestion.

All this the man with the needle must keep in mind as he sews. His work is performed with the utmost speed under the most trying circumstances. He sews like lightning, tying knots with his left hand, plying the needle with his right. He must often sew in deep wounds, with the shadows of his own hand in the way and blood obscuring his view. He must work in places where only a mirror can guide him. Imagine, for example, sewing the sheaths of nerves together. Nerves are slippery as eels to sew on, and often the work on small nerve ends must be done under a magnifying glass.

How can a surgeon learn to master the difficulties that even a simple internal operation presents? Part of the answer lies in the practice sewing he does. There is no question that the best men have developed their sewing skill by long hours of practice outside the operating room. One man who is a distinguished surgeon today used to pick up odds and ends of catgut left after the operations he witnessed as an intern and then try with needle





In suture factories, the most sterile conditions are maintained while the catgut is being tested for strength and absorbability. At left, a series of surgical needles, enlarged three-eighths actual size, are stainless steel, curved in a half circle. Some are straight; some curve slightly, and others curve just at ends.

and needle-holder to tie the most difficult knots. Another surgeon, who worked in a famous clinic, tells how he and his fellow interns used to practice on their handkerchiefs and on their white suits, attempting various kinds of knots and stitches and working always for speed.

The surgeon uses a variety of stitches, many of which have a familiar sound to any one who has done any sewing: glovers' stitch, running stitch, mattress and cobbler stitches, hidden stitches for facial surgery, baseball stitches which go over one skin edge and

under the next, button stitches passing through buttons to relieve some of the tension on the tissues and quilted sutures which look like those in a quilt.

But all these fall into two main types: continuous and interrupted. If there is no likelihood of infection and if by using one continuous thread he can get the desired tension and close matching of tissues, the surgeon will use a continuous suture. A great many times, however, he will tie off each stitch separately and cut the ends, interrupting his sewing and starting fresh with the next stitch. The reason? If infection should cause one stitch to break, others would hold; whereas, with a continuous suture the whole series of stitches would unravel. Too, the spread of infection is much less likely with interrupted sutures; and tension can be gaged more exactly.

Every precaution, of course, must be taken to prevent a single virulent bacterium from entering the wound. For centuries, infections and deaths occurred from unsterile surgical stitches. Bone needles and cords of animal tissue were employed by prehistoric man. Algerian caravan leaders sewed up the foot wounds of desert travelers with spun camel's hair. South American natives have for generations used the large, leaf-cutting Sauba ant in closing wounds. The ant is permitted to bite through the wound edges; its jaws retain their grip after death and the body is then pinched off.

Even as late as 1929 sterilized catgut was not always bacteria free. Infections, even deaths, occurred occasionally as a result of unsterile catgut. Obviously something had to be done. Numerous researches into the sterility of catgut were started. Some of the more responsible manufacturers financed research projects in leading universities. Finally a standard chemical test to detect the presence of bacteria was set up. The best manufacturers voluntarily adopted the test. Public opinion brought pressure on the others. Our new Food and Drugs Act now makes it compulsory for all.

Various types of thread are used by the surgeon. For special purposes he may use fine wire of silver, stainless steel or aluminum bronze; he sometimes even uses linen, silkworm gut or fibers from the kangaroo's tail. Silk is popular in surgery of the eye, nerves, tendons and arteries, and occasionally by some for clean wounds of the thyroid, stomach and intestine. But silk is nonabsorbable and provides a ready road for infection. A little silk knot in the bladder for instance, if infection accumulates around it, may end by becoming a bladder stone.

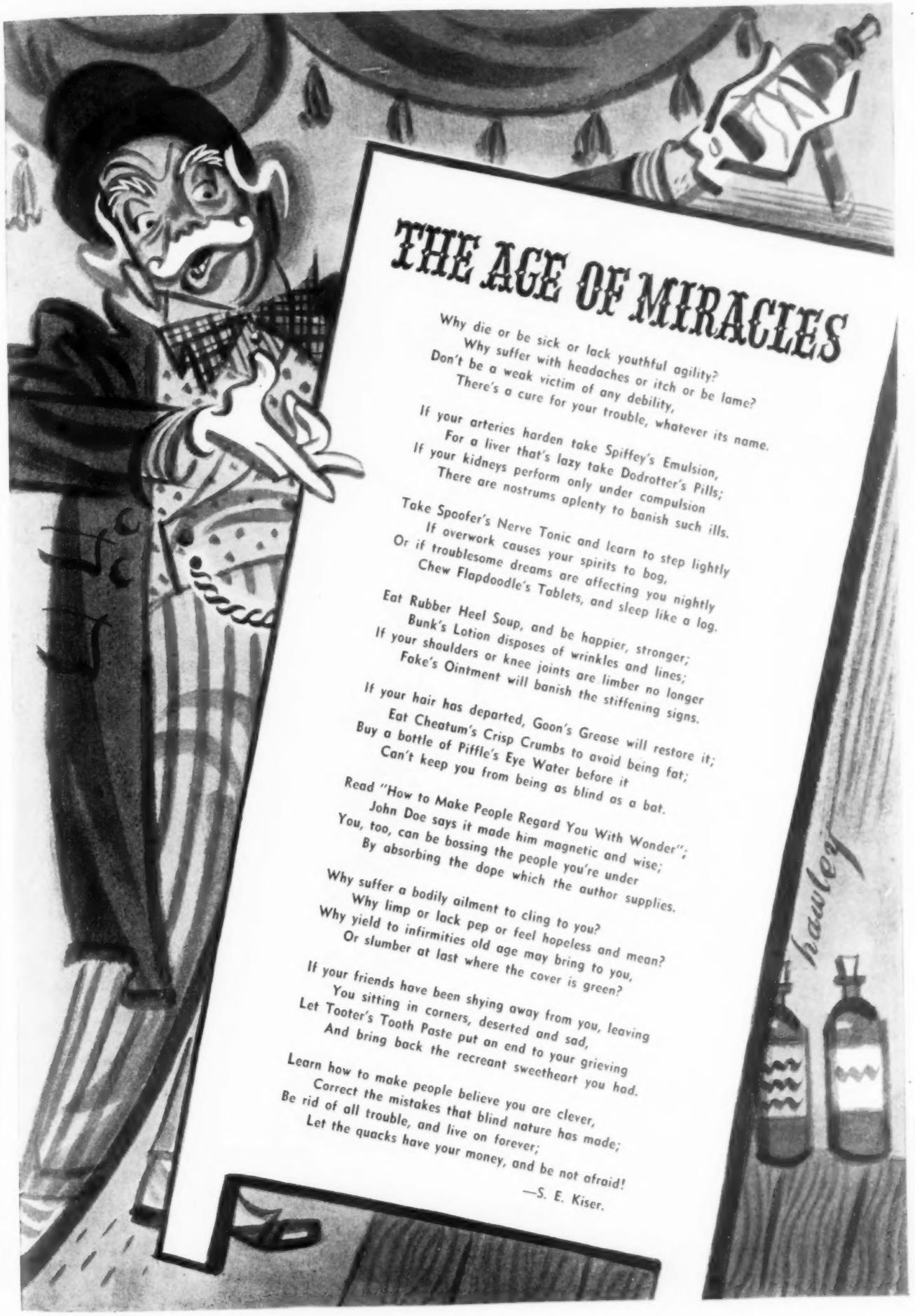
But the use of absorbable catgut (actually sheep's intestine, and no one knows how it got to be called catgut) far exceeds that of any other type of surgical thread.

The utmost care must be used at every stage of processing catgut, for when embedded in the warm, moist tissues of the body, even sterilized catgut may become a culture medium for the growth of bacteria already in the tissues. Therefore the manufacturer must not only produce a sterile suture but a germ-fighting one as well. From the stockyard, the string maker buys the intestines of government inspected sheep. Separating them into four layers, he discards three and keeps the fourth: the submucous layer, which has a rough and a smooth side. The rough is used for the strings of musical instruments, tennis and badminton rackets; the smooth is given a preliminary cleansing and split into fine "ribbons" which are spun together to form strands of raw catgut and shipped to a suture manufacturer for processing.

In the suture factories, girls in white caps and gowns like nurses work with hospital precision. First the raw gut is tested for excess fat. Then it is "plumped" for ply. A strand from one of those skeins marked 5-ply is taken to the chemical laboratory and suspended in a fluid which makes the twisted ribbons fan out like seaweed. If there are four instead of five ribbons the technician promptly re-marks that skein 4-ply, so that the surgeon may not be misled as to the strength of the gut. Next the gut is freed from all materials which irritate human tissues, and it is strung on giant frames in an alkaline bath, which neutralizes destructive acids.

Much catgut gets an additional bath in chromium salts to render it more resistant to the action of tissue fluids, thus delaying absorption. For, although absorbability is the quality which makes catgut so valuable as an internal suture, it must not be too rapid. In cases of extreme anemia or cancer the wound heals slowly and requires sewing material of varying and predictable *rates* of absorbability. By much experimenting with the chromic acid bath the manufacturer has learned to predict with fair exactness that catgut will absorb in 10, 20 or 40 days.

A special apparatus double-checks the absorbability of the catgut. Samples are suspended in test tubes, each strand with a tiny weight on the end of it. The tubes contain a fluid identical to the *(Continued on page 440)*



THE AGE OF MIRACLES

Why die or be sick or lack youthful agility?
Why suffer with headaches or itch or be lame?
Don't be a weak victim of any debility,
There's a cure for your trouble, whatever its name.

If your arteries harden take Spiffey's Emulsion,
For a liver that's lazy take Dodrotter's Pills;
If your kidneys perform only under compulsion
There are nostrums aplenty to banish such ills.

Take Spoofer's Nerve Tonic and learn to step lightly
If overwork causes your spirits to bog,
Or if troublesome dreams are affecting you nightly
Chew Flapdoodle's Tablets, and sleep like a log.

Eat Rubber Heel Soup, and be happier, stronger;
Bunk's Lotion disposes of wrinkles and lines;
If your shoulders or knee joints are limber no longer
Fake's Ointment will banish the stiffening signs.

If your hair has departed, Goon's Grease will restore it;
Eat Cheatum's Crisp Crumbs to avoid being fat;
Buy a bottle of Piffle's Eye Water before it
Can't keep you from being as blind as a bat.

Read "How to Make People Regard You With Wonder";
John Doe says it made him magnetic and wise;
You, too, can be bossing the people you're under
By absorbing the dope which the author supplies.

Why suffer a bodily ailment to cling to you?
Why limp or lack pep or feel hopeless and mean?
Why yield to infirmities old age may bring to you,
Or slumber at last where the cover is green?

If your friends have been shying away from you, leaving
You sitting in corners, deserted and sad,
Let Tooter's Tooth Paste put an end to your grieving
And bring back the recreant sweetheart you had.

Learn how to make people believe you are clever,
Correct the mistakes that blind nature has made;
Be rid of all trouble, and live on forever;
Let the quacks have your money, and be not afraid!

—S. E. Kiser.

Photos by Author

Focus on the doorway, and ring for the nurse. When she comes, snap on the Photoflood lamp and shoot. Exposure, *f* 4.5, 1/25th second on SS Panchromatic film pack.

PHOTOGRAPHER

THIS story is not for you photographers. It's for a sick friend of yours who is now in for a period of convalescence. When I took my first picture I was in a sanatorium; I'd been "strict bed" for two months and was still running a temperature. But I discovered there were many photographic operations, besides taking pictures, which were easy and fun.

Now I'm back on the job, with a new hobby and, as all you photographers know, with eyes better trained to observe things I'd never seen before.

One thing led to another.

A visitor brought me one of the photographic magazines. The illustrations were good photography, no doubt, but they didn't mean much at the time. I couldn't understand the articles, or I thought them "arty." The ads displayed cameras with names, shapes and prices which were fine for somebody else, not me. However, one manufacturer of printing paper

This shot took two weeks to get. It was taken early in the morning, and the sun had to be just so and my fellow patient awake. This way we got shadow detail without overexposing the window. Exposure, *f* 4.5, 1/25th on Super XX.

Plenty of things offer opportunities for pictures. This shot was taken after washing for breakfast. I used an Optopod to hold the camera and gave it 3 seconds at *f* 16 on SS Panchromatic film with #2 Photoflood in reading lamp. Be sure to lie still.

in BED

By LANSING T. CARPENTER

showed two girls in brief bathing suits and offered free literature.

It's nice to get mail when you're sick in bed. And it's nice to contemplate bathing beauties almost any time. So I sent a penny postcard.

That was the start. I sent penny postcards for literature on other things. I sent lots of postcards. And I got a shoe box and kept all the stuff on a chair by my bed.

I still have most of it and still refer to it in time of trouble. There are general catalogues, folders on speed guns, filters; how to take pictures at home, on a farm, in the dark; beautifully illustrated catalogues on cameras in color; cameras that cost less than a meal, more than a car.

I didn't have a camera and hadn't taken a picture, but I began to understand what the technical talk was all about. I made no particular effort and never let it bother me when some of the stuff went over my head. But I got interested, and the inevitable happened. I borrowed an old camera, sent for two rolls of film and began shooting.

That camera had an *f* 4.5 lens, not a fast shutter, and my bed was on a dark porch; but I could get the nurse when she stood still to read my thermometer.

If you are going to try photography in bed, I advise you to start with the shoe box. Fill it up with data on everything, because you never know what you're going to need next. Then, while waiting for your first roll of film to be printed, get out the shoe box and study up on exposure meters. Understand, for a time you will be taking pictures under what are called "adverse light conditions," but it will save film and improve your pictures.

Although there are many makes of exposure meters, there are just two kinds. The less expensive are the extinction type, where you measure the number of layers of paper the light will penetrate. In the other kind, the electric exposure meters, a galvanometer measures the current generated when light actuates a photoelectric cell. Either kind will gage the light on your subject more accurately

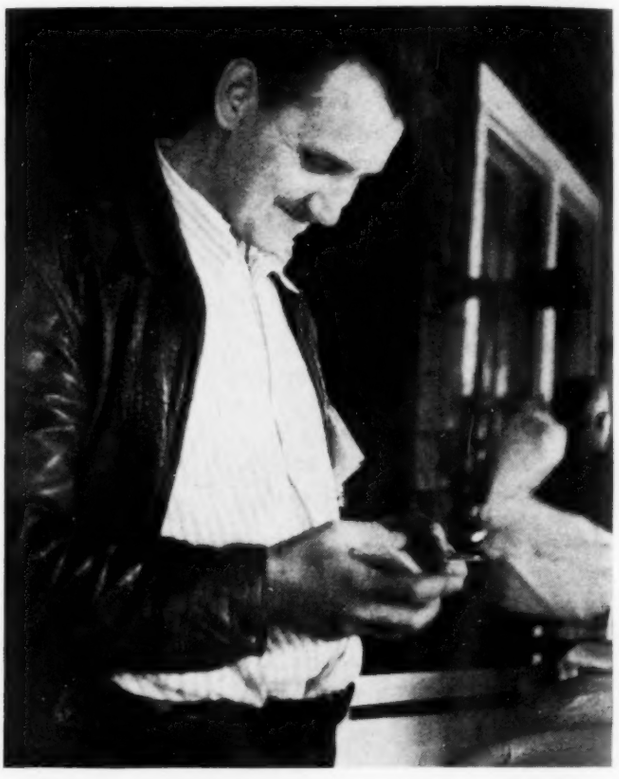
than you can guess it, and an easy manipulation will give you the proper camera setting.

It's not sissy to use a meter; it's professional.

Now you have your first pictures. Study your negatives. Oh, look at the prints of course, and pass them to the chap in the next bed. But pore over your negatives as if they were tomorrow's final examination. When your negatives are sharp, well exposed, well composed, with uniform density, you're doing swell. But the chances are . . . Well, mine weren't for a long time.

By this time you know the difference between a tripod and a between-the-lens shutter. But better yet, you're beginning to enjoy looking at pictures, good pictures. Borrow the photographic annuals. All your photographic friends have a couple. Study the best that's being done. If you don't get a big kick, you'd better give up photography before you spend any more money.

From your first couple of rolls you won't find many shots worth enlarging. From my first, there was only one, just the chap in the next bed with a twisted grin. As Sam Goldwyn said, "What did I do right?" I don't know, but it was in focus, and it looked like him. We thought it was swell, and so did his cousins and his aunts. I got him several 4 x 5 enlargements and charged him a quarter apiece. That paid for my next two rolls of film.



The boys who work around the sanatorium are pleased when you get a good shot. They are also willing to buy film for you when they go to town. Above, on an October morning, *f* 2.8, 1/50th second on Super XX film. Across the page, visitors afford excellent subjects for your pictures, and when they learn you are interested in photography, they bring their photos to show you.

Sunday dinner on the south porch in October was the setting for this picture. Stop down your lens to get depth of focus, and use a tripod. Exposure was *f* 11 at 1/10th second on Super XX film.

I did not send my films to the corner drug store. I sent postcards to several good photo-finishers asking for price lists. A good house charges no more than the drug store and does much finer work. The one I chose sent me a mailing bag, and then with every finished order they sent a new bag. That made it as easy as licking a stamp, for that's all I had to do, except pay the bill at the end of the month.

For my first album I paid a dime and joyfully pasted in almost every picture. And that album was circulated from bed to bed and exhibited with pride to visitors. Later I spent more money for a fine album; but then I couldn't paste a single picture in it without wondering whether the picture was good enough. It spoils the fun.

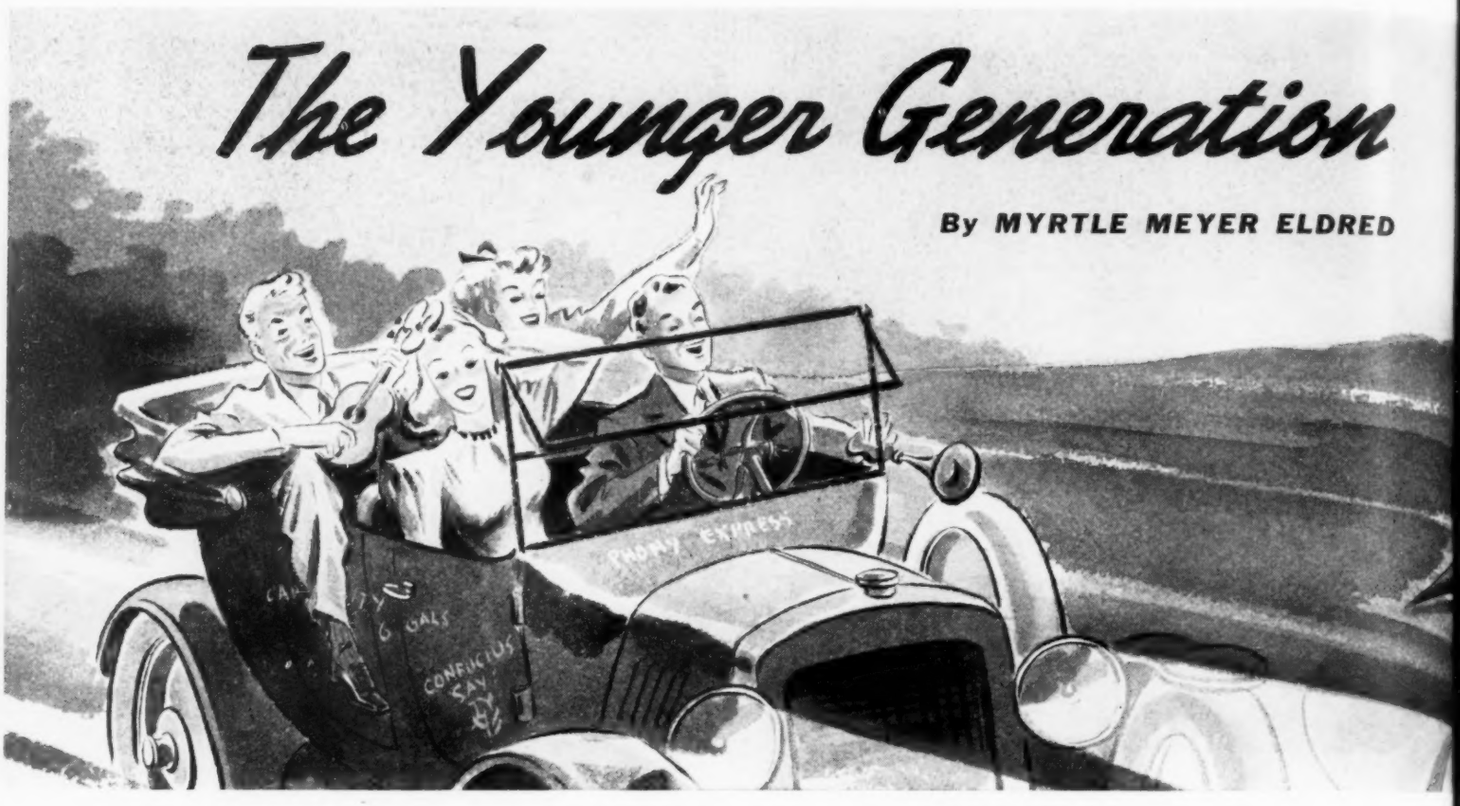
I'll let you invest as much as a quarter but no more, not until you've filled several, and then you'll know what you're doing. So get an album and get some rubber cement. Cover the back of the print, and cover the mount. Let them both dry; lay the print down carefully, and it's there for good.

Don't worry too much at first about the composition of the prints on a page. Group them logically, and stick them up. Sometimes I would worry so much about which looks best where that I wouldn't get anything done. Remember we're sick. We're supposed to be having fun, not work. And all these subtleties will come by experience.

You must devise some system for keeping your negatives. There are lots of good files. Send out more postcards or hunt through your shoe box for information and ideas. It's a matter of negative size and personal taste. I'm very proud of my files. My miniature negatives are kept in strips of four frames in Cellophane envelopes in a nice wooden box separated by cardboard dividers. I keep track of exposures in a looseleaf notebook, recording subject, time, date, stop and shutter speed. Each roll of films is *(Continued on page 449)*

The Younger Generation

By MYRTLE MEYER ELDRED



NOT long ago my neighbor told me how her son, aged 16, had taken the car one night for a date. There was just another boy, two girls and himself, going no place in particular.

At 1 o'clock she wakened, and he wasn't in. By 2 she was nervous, by 3 in a panic. She was simply incapable of imagining where on earth they could be at that hour of the night. An accident must be the answer. She saw them all lying crushed in some ditch, and the silent night the only witness to their agonies. Fifteen minutes more of pacing the floor, wringing her hands and imploring heaven to send them home safely—then, unable to bear the torment alone, she decided to call the family of the other boy, whom she knew slightly. His father answered the telephone sleepily and listened to her recital.

"Now, now, don't worry too much," he said soothingly. "Those boys are old enough to take care of themselves. Just go to bed, they'll be along shortly."

"But there could have been an accident," she persisted, weeping. "He's always let me know when he intended to be out so late."

"If there had been an accident, we'd know about it. But we'll give them a good scolding when they get home for worrying us so."

And sure enough in a few moments Wendell appeared, tired and cross. They had taken the girls home early and gone for a ride in the country. "The moon was swell, Mother." But there had been a flat tire, a jack which wouldn't work, and they had had to "hoof it" home.

"What's all the shouting about. You'd think I was a baby."

You slink to bed, feeling ashamed, if you're the worrying kind, when you see yourself through your children's eyes. But you know there is cause for worry. Accidents are so common and so horrible! Therefore, how can any parent draw a long breath until the children are home safely?

But there seems to be such confusion in the minds of parents. The possession of a car makes so many apparent problems.

But knowing, as they should, the full stature of their opponent, parents should be able to work out a program to combat it. We, as parents, have to begin in the children's infancy to build up proper automobile behavior. We cannot let the toddler play with the ignition key as we drive. He cannot hang on doors or stand up in the seat. Those are things we don't do when we drive. And if he rebels and refuses to conform, willy nilly, he goes home and stays there for a few days of no driving. By such methods he learns.

We have to be self conscious about our own driving practices. Do we always slow up at curves? Do we stop at all stop signs, or only when a car is in sight? Do we heed the meek

Steps Out

signs which murmur "slow"? Do we conscientiously stay behind cars on hills? Do we have periodic check-ups on our cars, tires, batteries, lights and brakes?

Youth is most impressionable. A child learns not only our best but all our driving practices, and he imitates them embarrassingly when he has command of the wheel.

School is the proper place in which to teach driving. There traffic rules and traffic manners can be learned like lessons, and teachers will be in a strategic position to enforce penalties for infractions of them. The school might even be able, through the pupils, to teach parents some valuable lessons. Ours has been a hit and miss system of instruction.

Obviously, for the mere comfort of being chauffeured, parents should not yield to the boy's plea to be allowed to drive them before he is legally of driving age. What can we expect of the boy if we are contemptuous of law?

There are parents who consider their chief problem to be the amiable partition of the use of the car in a family of two adults and two or more adolescents. They feel they are completely stymied in trying to solve all the other problems the children's use of the car brings up.

So let us take the family situation. The car is the common possession of the family. It is not the father's just because he paid for it; presumably he pays for everything. It is not the mother's, because she is sometimes less agile than the children in getting about. It belongs to them all. To plan for its equitable division demands exactly the same ingenuity, self sacrifice and good nature as is demanded when parents apportion out home tasks or fix allowances; it should be commensurate with the child's age, ability and his own income.

The conflict between what a child wants and what his parents will permit begins early in childhood. So there are constant opportunities for the parents to practice striking a neat balance between selfish prohibitions of, or lavish concessions to, the child's demands. This practice will come in handy when the child is old enough to drive a car.

A chart, incidentally, works as well for this as for other family problems. On the chart or calendar at the beginning of the week may be noted the engagements for which the father, mother and children need the car. Around these fixed dates may be staggered the use of the car for pleasure. If the chart is sufficiently flexible and each member of the family willing, at times, to suffer some personal inconvenience, the situation solves itself. It is not one which demands that there shall be a car for every two children.

The second problem looks more ominous. It is called the "moral hazards." In a few minutes children may get far away from the

restraints imposed by familiar surroundings and persons. Parents have had 15 years or more in which to build up and solidify the child's moral standards. They should have given him, or her, sufficient education to make him capable of understanding his own emotional impulses and their potentialities. They should have been busy showing children how to act by acting that way themselves. If after fifteen years devoted to education and an example of decent behavior, a child cannot be trusted out of sight, then whether he departs in a motor car or a hay wagon is beside the point. He would always be a poor moral risk.

There has been, as we all know, an enormous increase in the freedom and a change in the manners and customs prevailing between the sexes. The car is just another means by which children can be alone together. To be alone is a necessity to their happiness and their development. They have to escape supervision, occasionally, in order to test out under stress of temptation the ideas and the education with which they have been supplied. It is far too easy for parents to blame the automobile for their own failures to educate their children for independence and self control.

Yet mothers, despite their expressed fears, show every indication that they do not regard this aspect of the car problem too seriously.

The third problem is the danger of speed. It is related only to the motor car. And our fears are directed in the main not toward our daughter but our son drivers. Girls are more inclined to follow the conservative pattern of driving set by adults. They are less interested in machinery. Their physical limitations, such as size and smallness of feet, make the danger of speed, as it relates to the adolescent female driver, almost negligible. This is proved by statistics. Of drivers involved in fatal accidents 91.7 per cent were men, only 8.3 per cent women.[1] So our corrective blasts should be turned toward our boys.

Cars these days are so mechanically perfect that any one can learn to drive. A boy knows how, long before he is old enough to be entrusted with the wheel. He has sat beside some adult imaginatively pressing his foot on the clutch, making the *H* pattern of the gear shift, pushing on the gas. When he is given the wheel his almost immediate command of it seems nothing short of magical.

Not only can he handle the car with surprising ease, but he can pull it apart and stick it together again with incredible skill. His reflexes are nimble. But nothing can alter the fact that although he may be able to acquire a license to drive at 16 years of age, neither his judgment nor his experience is as mature as his manual dexterity.

To tell an adult that he drives like a high school kid is an insult. Yet all high school boys drive that way. Nonchalant—in order to impress their audiences with their mastery of cars. Fast—because it makes their own skins prickle pleasingly to press toes on accelerators and feel cars leap forward in response. Scornful of traffic regulations—because so seldom do they suffer any personal penalties; fathers are so ready to pay their fines. Indifferent to adult warnings—because adults are always stodgily cautious and so their repetitious warnings to "Be careful" fall on deaf ears.

Boys are in constant competition with adults and with older brothers or sisters of the family. The more quickly they can match or excel in any skill the more quickly can they live down the blemish of their youthfulness. The car gives them one such opportunity to shine.

Likewise, cars furnish their youthful drivers with a unique psychologic satisfaction. To modern youth reared in a world with no Indians to kill, no wild animals to shoot, little real or difficult work about the home to perform, with only the vicarious thrills supplied by radio, screen or literature, the one valid thrill youth can experience is to slide close to danger and possible destruction and conquer it clear-headedly through its own skill. Eighty miles an hour may be a means of getting somewhere fast to an adult; to a youth it means danger, and how he loves it!

We must have objectives for the future. We do need wider, better lighted, more uniformly marked, better policed highways. We must afford the gradual elimination of grade crossings. The lights, brakes and batteries of our cars need periodic attention.

In order to set the right parental example, we must change our own attitudes. We allow our children to deflate us with their scorn, to laugh at our anxiety and to ridicule us for our worries. That's our fault for having weakened our own offensive by grumbling about the loss of our petty conveniences, by getting up steam over the possible hazards to our children's morals. By deflecting our aim we have dulled and weakened the influence of our attack on what is the real evil of the motor car: its potentialities for speed and therefore its power for death and destruction in the inexperienced and nonchalant hands of thrill-seeking youth.

1. From "Types of Motor Vehicles and Sex of Drivers Involved in Accidents in 1937," published by The Travelers Insurance Company.

MOTHERS' HELPERS

By ETHEL S. BEER

THE day nursery is a social agency dealing with a special group of underprivileged children who usually have a peculiarly unfortunate background. In the majority of cases their mothers are at work all day. The poverty and congestion of their living conditions may be aggravated by emotional stress due to friction between the parents, the desertion of one parent or any of the causes underlying broken homes. The day nursery then assumes the responsibility taken by the family. It must be health conscious.

The age range for day nursery children varies in different localities, but it generally includes

Arnold Eagle

A physical examination in the day nursery's clinic is required before the children are admitted to classes.

preschool children. Less frequently, infants are included as well as school children.

While there are board of health regulations in most communities, these are not sufficient to safeguard the health of the day nursery child. For although they may control communicable diseases and sanitary conditions, the day nursery has a greater problem to face, namely that of building a concrete health program for its neglected children.

Brightside Day Nursery in New York City furnishes an example of a concrete health program. It is emphasized throughout its activities. There is a health center in Brightside under the direction of a pediatrician [child's physician] who supervises the physical care of the children and who works in cooperation with the superintendent of the day nursery.

This health center carries a dispensary license, but its work is devoted mainly to a positive health program. Before a child enters the day nursery, he must be vaccinated against smallpox and immunized against diptheria. If these measures have not already been taken when the application for day nursery care is made, the child is sent to the board of health station. Today the Sanitary Code of New York City insists that all day nurseries be responsible for this protection for their children. But long

Every month each child has a routine check-up by the doctor.

Part of the daily routine is devoted to personal cleanliness.

Art is one of the classroom subjects given these children.

Many of the day nursery children are of preschool age.

before such regulations went into effect, Brightside took such precautions for its children. In fact, as early as 1925 it immunized them in the clinic.

A physical examination is also required before a child is admitted to Brightside. The child must come to the clinic session and be examined by one of the doctors. No other doctor's certificate is accepted. Also, the child must be admitted to the day nursery within three days or be reexamined. After the child is in the day nursery, he may not be absent for more than three days without returning to the doctor. If Brightside is closed for a three day period, there is a clinic for the whole group. The official time limit is a week, according to the New York Sanitary Code, two weeks according to that of the state. Brightside also insists on a reexamination after any sickness, even though the child may have been out less than three days.

Every month the Brightside child has a routine check-up by the doctor. It is a pleasant sight to watch each group go through this, because the children are utterly at home and rarely fear the doctor or his movements. Of course, this is partially due to his attitude, but the frequency of the examinations is a factor. Incidentally, this frequency was recommended by the National Federation of Day Nurseries, which has now been superseded by the National Association of Day Nurseries.

Brightside Day Nursery has between eighty and one hundred children. The age range is approximately from 10 months to 9 years. These children are divided into groups: a baby's department, three classes for the preschool age and one group for the school children. The staff consists of a baby's nurse, her assistant and seven teachers. The superintendent and her associate, both social workers of long experience, are in charge.

The personnel of the health center is distinct from that of the day nursery. A graduate nurse and a social worker are employed full time. The time spent by the doctors and the dentist ranges from two hours a month to six hours a week. With the exception of the physician in charge of the clinic, none of these is in the direct employ of Brightside. But in all cases, their duties dovetail into the program of the day nursery. Both organizations merge their services primarily for the benefit of Brightside children, although there is a certain amount of outside work too.

Medical clinics are, as a rule, held twice a week and are usually presided over by a physician who has been with the clinic since it started in 1923. One clinic is always open to outsiders, the other is not, except for emergencies; the baby's clinic is held once a month. Many children begin coming when they are babies and continue until they are young men and women. It is a joy to watch these boys and girls grow up and to see them return in later years with their own children. The outside children are examined twice a year; but babies come oftener.

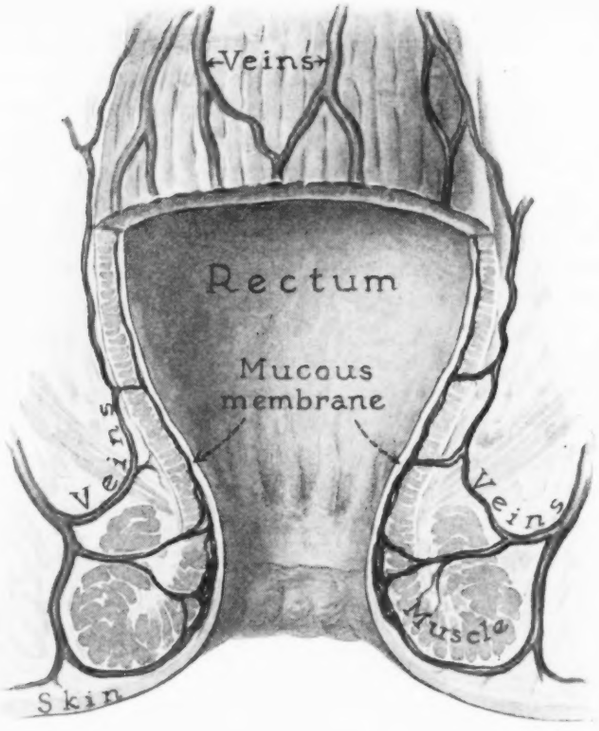
The woman doctor has one or two clinics a month for the older girls and mothers. The girls are requested to come twice a year, the women once. It is considered essential at Brightside to have the mothers of the day nursery children examined.

The dental clinic is primarily for the day nursery children. The dentist is present one day a week. The child's teeth begin to receive attention at the age of 2, and the dentist is untiring in his efforts to save the temporary teeth whenever possible. These first teeth are filled rather than pulled whenever possible. The aim is to have the mouth of every child in order before he goes to school, which is no easy task, because the majority of these neglected children have many cavities.

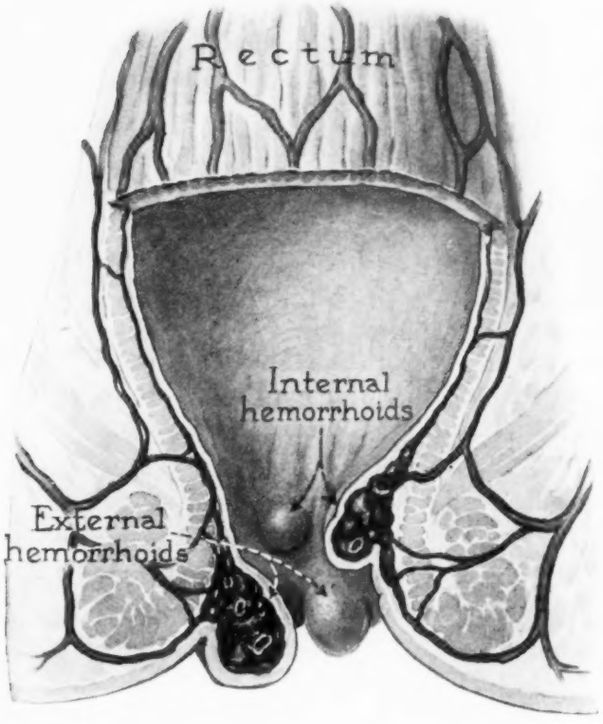
Eye testing is another service given to each Brightside child. This is done by an eye physician once a year. For further treatment the children are referred to a hospital. The eye clinic is for the day nursery children only and is held as often as is necessary to go over the whole group. In certain day nurseries in New York City the Junior League girls are permitted to do eye testing. The danger of putting this responsibility into the hands of untrained persons is that they are not qualified to detect eye defects.

Testing the hearing — another routine measure for the Brightside child—cannot be done in the clinic. One of the hospitals provides equipment and examiners for this service, at which time the nose and throat are also examined. Three or four children at a time are taken to the hospital.

Specific tests, such as for a child's susceptibility to tuberculosis, may be recommended by the doctor for the whole group in the day nursery. Also, he may refer individual children to hospitals for treatment. All such matters are in his hands. This is important, since he has the whole physical care of the day nursery children to supervise. The rules for the exclusion of children from the classroom are in his hands. The control of communicable diseases — always a bugbear with small children—is under his *(Continued on page 460)*



Hemorrhoids occur in the rectum, both inside and outside. At left is the normal rectal region, and below, the region as it appears when there are hemorrhoids present caused by the varicose veins.



HEMORRHOIDS

By HAROLD LAUFMAN

"DOCTOR, what are hemorrhoids? How serious are they? What should be done for them? Can mine be treated by some nonsurgical means, or must they be operated on?"

Hemorrhoids or "piles" are merely coils of dilated veins occurring either just outside the lower opening of the bowels and covered by skin or just inside the opening and covered by mucous membrane. The former are called "external" hemorrhoids, while the latter are designated "internal" hemorrhoids. Both types often occur simultaneously. The foundation for the external type of hemorrhoid exists when the veins beneath the skin of the margins become involved by infection. This infection leads to distortion of the veins, which in turn makes these veins become varicose, comparable to varicose veins in the leg. These varicose veins cause the overlying skin to become redundant, and the consequent "pile" or hemorrhoid ensues. Internal hemorrhoids are also composed of varicosities, but these are under the mucous membrane of the rectum and are made up of little venous lakes. These internal hemorrhoids may protrude through the opening, especially when straining at stool, and produce much pain and discomfort.

Although the usual age at which hemorrhoids begin to cause symptoms is 45, they may occur at any age and have even been seen in infants. What then, causes hemorrhoids to form? At one time it was thought that sedentary occupation was a significant factor. However, about 50 per cent of the cases have been found in laborers and active, hard-working persons. It was thought that women suffered more frequently from this condition than men, but large statistical series from various clinics throughout the country show that hemorrhoids occur about equally in both sexes. Pregnancy has been accused as being of significance because of the pressure of the pregnant uterus on the pelvic veins. Of course, delivery has a definite effect on the rectal region, because of the severe stretching of tissues, and it is possible that hemorrhoids and other ailments may result. There is apparently little relation between varicose veins in the legs or any other part of the body and varicosities in the lower bowel. However, there does seem to be a hereditary factor, but this is by no means true

in all cases. Constipation is thought by many laymen and physicians to cause hemorrhoids, but there is no real causal relationship. The answer to the entire problem is simply that there are several possible causes of hemorrhoids, and no one cause can be blamed for all.

How can one become aware of the presence of hemorrhoids? The average patient will say, "I first noticed that there was a lump protruding, especially when I strained at stool. I next noticed that there was a small amount of blood on the tissue paper." Others will say, "I have a sharp pain in the bottom of the bowel when I strain at stool, and this pain sometimes persists for a long time afterward." Any one of these signs may occur first, or they may all be present together.

It should be stated here that hemorrhoids may be present for a long time and not produce symptoms. In such an instance, pain appears only after some related condition or complication occurs, such as a fissure or thrombosis. A fissure is a break in the mucous membrane of the opening. Thrombosis merely implies the clotting of the blood in the little coils of veins of the hemorrhoid. This is usually caused and accompanied by local inflammation.

The most important aspect of the symptoms is that there are a number of other rectal conditions which give the same symptoms.

It is sad but true that many persons possess a mid-Victorian squeamishness about being examined rectally and therefore will go along suffering for many years before finally submitting to an examination.

When you go to a competent physician or proctologist [a specialist in rectal diseases] and say, "Doctor, I've got piles," you may wonder why he will first take a careful history of your symptoms, stool habits and general health. You may wonder why he does a painstakingly complete physical examination and then proceeds to do a digital examination and then a rectal examination through the proctoscope. You may wonder why he then inserts a longer instrument, called a sigmoidoscope, and looks high up into the rectum, when actually you came to him just for your hemorrhoids. He then will inform you that you do have hemorrhoids and tells you what has to be done about them.

The reason why such a complete examination must be carried out is that your doctor knows there are a number of other rectal conditions, some serious, which may give rise to your symptoms and that despite the fact that hemorrhoids are present, other conditions which may be present must not be overlooked. He looks for conditions in the region of the opening, such as fissures and fistulae, tuberculous conditions of the skin, tumors and infections. If hemorrhoids are present, he must find out whether there is active infection present, whether they are clotted or whether there are ulcerations on their surfaces. If the hemorrhoids are of the internal variety, he must determine whether they prolapse [fall down] under strain. He examines the crypts and papillae [longitudinal folds of the mucous membrane of the opening] to see whether they are infected. The sigmoidoscopic examination will tell him whether or not you have a growth higher up in the rectum. Because most patients presenting themselves for care of hemorrhoids fall into the cancer age group, 40 to 50, the doctor must make doubly sure that he does not overlook a growth higher in the rectum.

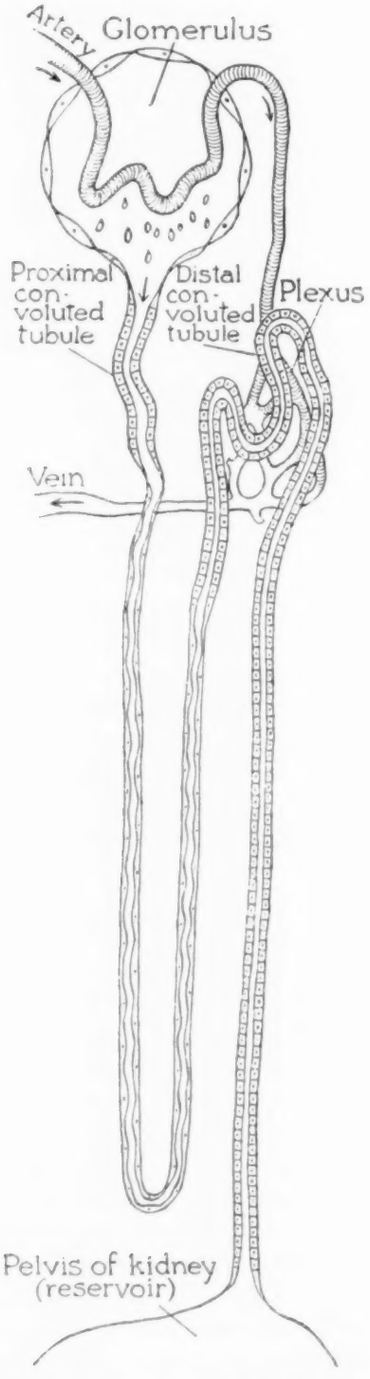
After your doctor has confirmed your diagnosis of hemorrhoids, you look at him expectantly and venture, "Doctor, I have heard that a hemorrhoid operation is painful. Can't I receive medical treatment, as some of my friends have?" Your doctor's answer, of course, will depend on many factors. He will tell you that there are certain types of hemorrhoids which just cannot be treated by injection. In some few cases, on the other hand, surgery is inadvisable. He will tell you that in most cases surgery is the treatment of choice and is the treatment which usually gives best results. These days the operative removal of hemorrhoids is no longer attended by a great deal of pain, and therefore the patient should have no hesitancy in going through the operation because of the fear of postoperative discomfort. At any rate, your physician should be the judge in such matters, and your own fears or desires should be of secondary importance.

What will happen if you neglect your hemorrhoids and do not go to a physician? What if you do nothing about them, even after consulting a physician? For one, the symptoms will progress to a point where you will be compelled to seek relief. Next, the hemorrhoids may become infected; ulcerations and abscesses may form, and hemorrhage or severe bleeding may occur. Then there is always the danger of some other more serious condition being present, and finally, there is the possibility of cancer.

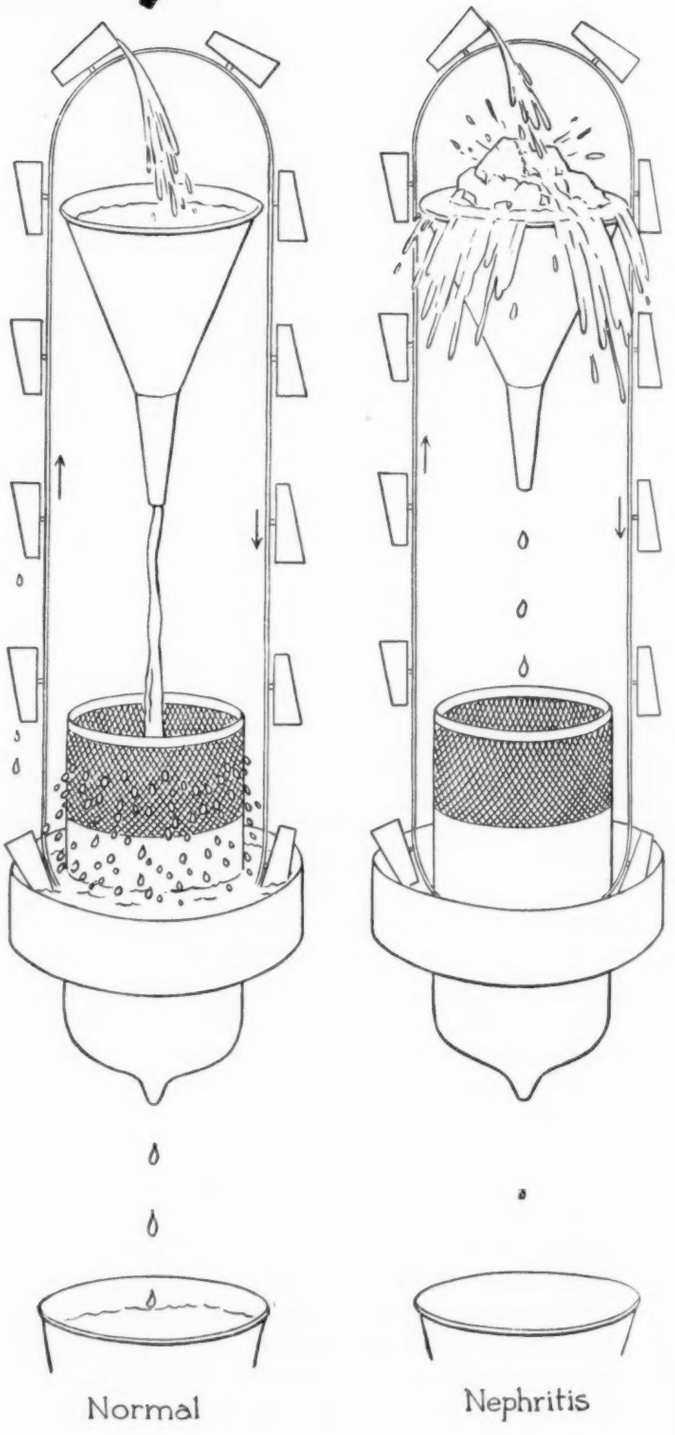
Hemorrhoids, therefore, need no longer be a mysterious evil, attended by much suffering and speculation. Today they are a curable malady from which no one need suffer.

In each kidney, there are 2 million tiny grapelike clumps of specialized blood vessels, or glomeruli. Urine is formed as the blood enters the glomerulus under pressure and leaves liquid waste and certain solids. This squeezed out fluid is then caught in a small funnel and passed down the tubule toward the kidney pelvis. In the diagram, it is shown how the normal kidney works and in nephritis how the inflamed kidney cannot perform its task of excretion.

Deadly Disease



Scheme showing unit of kidney tubules and glomerulus



Normal

Nephritis

Number 4— Inflammation of the Kidneys

By M. HERBERT BARKER

NOTE: Nephritis, or inflammation of the kidneys, was fourth in the list of the causes of death in 1937. It was responsible for 102,877 deaths or about 7.1 per cent of all deaths.

There may be various stages of inflammation of the kidney and different forms of kidney disease. There is the form that comes on suddenly and which may result in death within a few days. Far more frequent, however, is the chronic form of inflammation of the kidneys which is known as Bright's disease.

Acute inflammation of the kidneys is such a serious condition that no one is likely to neglect it very long. In that condition, blood may appear in the urine. There may even be sudden complete loss of consciousness. Such acute inflammations of the kidney frequently follow serious infectious diseases.

Chronic inflammation of the kidneys includes a number of different forms of inflammation. These involve different parts of the kidney, including the little groups of cells which collect the material that is to be excreted, the glomeruli, the tubes through which the fluid passes and the blood vessels. When the kidney is unable to get the waste material out of the body there is an accumulation in the blood cells. Then there is swelling of the tissues, which is called edema. At the same time more work is thrown on the heart.

The most important type of chronic inflammation is that which is termed degenerative or senile because it occurs in old people. In the majority of these cases there may be high blood pressure, which has existed for some time.

To prevent serious disturbances of the kidney, early detection is of the utmost importance. These disturbances manifest themselves at an early date by the presence of albumin in the urine or by changes in the blood which indicate that the kidney is not doing its work satisfactorily.

A regular physical examination of the body will tend to detect the disease at an early stage, when much can be done to control its progress. The early detection of high blood pressure is also important.

Prevention of infection is important as a means of preventing inflammation of the kidneys. Next, of course, is the limitation of work that the kidney must do. A suitable control of the diet is important.—THE EDITOR.

A NUMBER of changes may involve the human kidney, many of which have been grouped together under the term "Bright's disease." A famous London physician, Richard Bright, first demonstrated the association of swelling of the human body (dropsical conditions), urine which coagulated when boiled and changes in the tissue of the kidney. This triad, which he presented in 1827, represents one of the great advances in the study of human ailments; it was based on his careful observation of the manifestations of this complicated disorder. Bright's name has been attached to this group of disorders to this day. Most interesting of them all is the one now called glomerulo-nephritis.

Nephritis is a combination of inflammation and degeneration of the delicate anatomic divisions which make up the substance of the kidney. This destruction of the kidney is then associated with the presence of albumin and blood in the urine. Usually there is an increase in the blood pressure and variable degrees of swelling of the body. Glomerulo-nephritis most frequently occurs in children and in young adults and is brought about by infection somewhere in the body. The experience of physicians shows that the streptococcus is the most common germ which causes this infection. It is not surprising, therefore, that glomerulo-nephritis commonly follows scarlet fever, streptococcus throat infections, erysipe-

las, streptococcus pneumonia and inflammation of the sinuses, bones or glands. In addition, exposure to cold and inclement weather may predispose the human body to such infection. Similarly, poor housing conditions, inadequate or unbalanced diet likewise play a role in reducing one's resistance against such malicious invaders. Poor hygienic conditions of the teeth, tonsils and chronic disorder of the nose and throat structures serve as fertile fields for the possible development of this more specific and serious streptococcus infection. The symptoms and physical findings of acute nephritis peculiarly appear some ten to twenty days after the onset of the streptococcus infection.

The symptoms, which most commonly attend the development of acute glomerulo-nephritis, include persistent headache, mental depression and fatigue. If the disease becomes more serious, additional symptoms like nausea, vomiting, stupor and convulsions may appear. The sufferer may lapse into a deep coma with labored breathing, and he may die within a few days. Usually the skin develops a pale or pasty appearance. There may be some puffiness and swelling under the eyes, on the backs of the hands and around the feet. The blood pressure will usually be moderately elevated and the pulse slow and firm. As the disease progresses or becomes more serious, the swelling may become enormous, so that the tissues everywhere are filled with water. Even the body cavities, such as the abdomen, the space around the lungs and around the heart, become filled with this retained liquid. Special examination of the eyes may show that the disease has produced swelling in the lining of the eyes and rupture of their blood vessels, causing large bloody spots which may not only interfere with vision but actually cause the patient to become blind. At such a time the blood pressure has usually reached high levels where it may remain until the patient gets over the acute attack.

As in all other diseases of the human body, the symptoms and physical appearance vary greatly in each case. Occasionally acute nephritis may exist without producing symptoms or noticeable changes at all. It is not surprising, therefore, that a disease of the kidneys may have existed unsuspected for months or years unless a routine physical audit or insurance examination is made.

Whenever Bright's disease is known or suspected, the most important single examination is that made on the urine. In the acute stage the urine is usually scant, so that only one or two cups may be passed in twenty-four hours. Such urine is highly concentrated and appears smoky, brown or red. This color change is due to the fact that blood is oozing through the fine blood vessels of the kidney into the urine. Occasionally the urine may be so bloody that it is the first and only symptom which causes the patient to consult his physician. Routine questioning for this symptom may elicit the story that the patient had noted a pink or red urine; but he had attributed it to some medication which he had purchased and taken for a cold or sore throat, for certain new drugs that are taken for infections are excreted through the urine and cause it to appear red. Caution must be used by both patient and physician when such observations are made or reported. Albumin will be found in large amounts. When the urine is heated, the albumin may coagulate as a solid clot, much like that of the white part of the boiled egg. When the urine is placed under the microscope, it will show the red color to be due to red blood cells in large numbers, some of which are clumped together in cucumber shaped masses.

These minute masses of red cells are called red cell casts. The term "cast" refers to a mold obtained when the urine passes through the tiny tubules of the kidney; the urine is so concentrated that its constituents are packed together and allowed to congeal. Naturally, they take the size of the little tube in which they are formed. Their substance is made up of the products coming out of the kidney at that particular time. In addition to these casts made of red cells, other casts may contain the elements and contents of the kidney tissue which is being broken down by the disease. Such casts may therefore appear coarse and granular under the microscope. Obviously, the degree of destruction of the kidneys will be reflected closely by what the urine examination shows. By the periodic examination of the urine, the physician gages not only the rate and degree of destruction of the kidney but also the rate of improvement and the ultimate recovery.

Next most important among examinations is the chemical analysis of the circulating blood, drawn from a vein. A physician or chemist may check the components of the blood to gain information regarding the patient's general condition. Such measurements include calculation of the amount of waste products, such as urea, creatinine and certain minerals, which are retained in the body. These chemical analyses of the blood *(Continued on page 478)*

A FIRM HAND

By RUSSELL V. BURKHARD

WERE one about to embark on the venture of raising skittish colts into good sensible horses, both work, circus and race, there are perhaps certain obvious procedures to follow. No doubt we'd get a reputable trainer's ideas and fit these into our problem as seemed best. Facetiously or otherwise, it might be a stable-minded approach.

While I make no wild claims for being a trainer of young people, I have, however, a fair record of work and play associations with boys and girls. In the home I have assisted in the rearing of three, participating actively in the complete course of sprouts from diapers to degrees. In my job as camper, teacher and principal for twenty-five years in American public and private schools, hundreds of young people have mellowed my judgments. It has been a privilege to work with youth.

There are a few time-tried, substantial principles that parents may apply in the joyously worrisome business of rearing a family.

First is obedience. Never "double-cross" Mother Nature. For instance, watch natural life as it develops, and note the responses to discipline and obedience in young animal life. The mother bear smartly cuffs the erring cub when he thoughtlessly or devilishly breaks the rules and exposes himself and his family to danger. I do not sanction the stony, hard path of discipline by the rod. Develop rather a system of explaining why to youngsters. Be firm and reasonably brief about it, but *mean* it, and back it up with a rational penalty, not necessarily physical. It is too sad a spectacle in American life today to view the fractious youngster (he's often the only child) who doesn't mind. He's a community pest and a source of danger to himself and others, because he refuses to obey the rules of the game. He's the kid who wants four strikes instead of three. The rest of his life he must fight down the prejudices against society which his parents in their unwisdom let the poor lad build up.

Pay him only for extra jobs.

This could be amplified ad infinitum. But you get the point. Insist on intelligent obedience, and if it can't be cooperative, then make it one-way traffic, even if it hurts. Resolve not to shock-absorb the jolts that your child normally has coming to him.

Second, children need an accumulative, wholesome contact with labor values. From early childhood, it may start with picking up their clothes and expand until it includes duties that affect the family group. Gradually assuming the responsibility of doing some necessary labor puts youth into the work-a-day world without too costly a wrench. When your child has a fair idea of elbow grease, pay him for some of the extras. It is unwise to recompense him for necessary duties. Then urge that he be thrifty with his earnings. The indulgent parent is committing mayhem when he showers a youngster with a dollar for a half hour wipe-off assignment on the car. That youngster is apt to get such a "cock-eyed" idea of values, such an overcapitalized sense of his own importance, that he begins then and there to lay the groundwork for dishonest practices. Easy money? There is no such thing. All the so-called "easy-come" lucre has all the earmarks and discomforts of "easy-go." The sure-fire satisfactions, the peace, the contentments of life come from doing an honest, thoughtful piece of work. Swindling is hard on the conscience, and society is tough on the swindler.

Third, instill early a good social point of view. Teach your youngsters to respect other

people's property and ideas. And then, chances are that you can visit the boss' home without the embarrassment of seeing your hopeful bouncing off the davenport. If in later years, the kid breaks a window, it will be natural for him to accept the consequences of the disaster in a manly way, rather than disappear and leave his companions to hold the bag. Furthermore, your lad or daughter should learn to hear other opinions than his own. One can be respectful of another's prejudices, minority mumblings and what-not without sacrificing self respect and courage. But if a democratic form of American life is really to exist, you parents must provide it in your homes. Probably nothing will help more to promote and preserve it than a good, wholesome, social, cooperative attitude, with a real old-fashioned argument now and then thrown in for good luck.

Fourth, watch your child's companions. While this item has in it elements of luck, you parents can nevertheless be consistently negligent of what is happening outside the home in this respect. If things look dubious, you can subtly begin to substitute an activity program of your own. It may start by taking your lad and his companions to a hockey game or a high school track meet. Have the home open and ready for ping-pong, cards or dancing. If you forbid association with boys or girls whom you think undesirable, you'll tend to drive the whole matter under cover. And that's bad. When you curtail, then substitute something as nearly absorbing as you can make it. This will not be comfortable and easy for you, particularly if you haven't been used to sports and games. But the companion problem is significant. It can make or break a youngster so quickly that it's worth much of your time and attention. But don't become his "pal" all of a sudden. Young people quickly detect such nonsense. There is a finesse to observe and a dignity to maintain.

Teach your youngster respect for other people's property.

Fifth, expose your child to the wonders of nature. Sacrifice, if necessary, to provide some time in the year for him to live close to a natural, simple life. There are choice values and judgments in meeting some of the less smooth moods of outdoor living. Let children develop the self reliance that comes with the mastery of swimming or of sailing and caring for a boat. Nature can debunk false pride rapidly. It can also build character and courage. Try hard to pack some carefully selected camp life experience into the lives of your children. Mind you, this doesn't have to be an expensive proposition; neither does it need to be done blindly on your part, for in some cases more harm than good will result.

For the more detailed, emotional, educational and physical problems, you're going to seek the many helpful resources of your community. These five are merely things you can carry on the tips of one hand. But, remember you'll need *two* hands to do the job well.

Put on the thumb, *Obedience.*

Use the index finger for *Labor.*

The middle one for *Social Point of View.*

On the ring finger you have *Companions.*

And on the smallest digit, but by no means the least, place *Natural Living.*

Expose your child to the wonders of nature, so he may learn their values.

The successful teacher is one who sets the example in the ability to adjust to various problems of life, says **FRANK ASTOR**

New York City Schools

MENTAL HYGIENE in the CLASSROOM

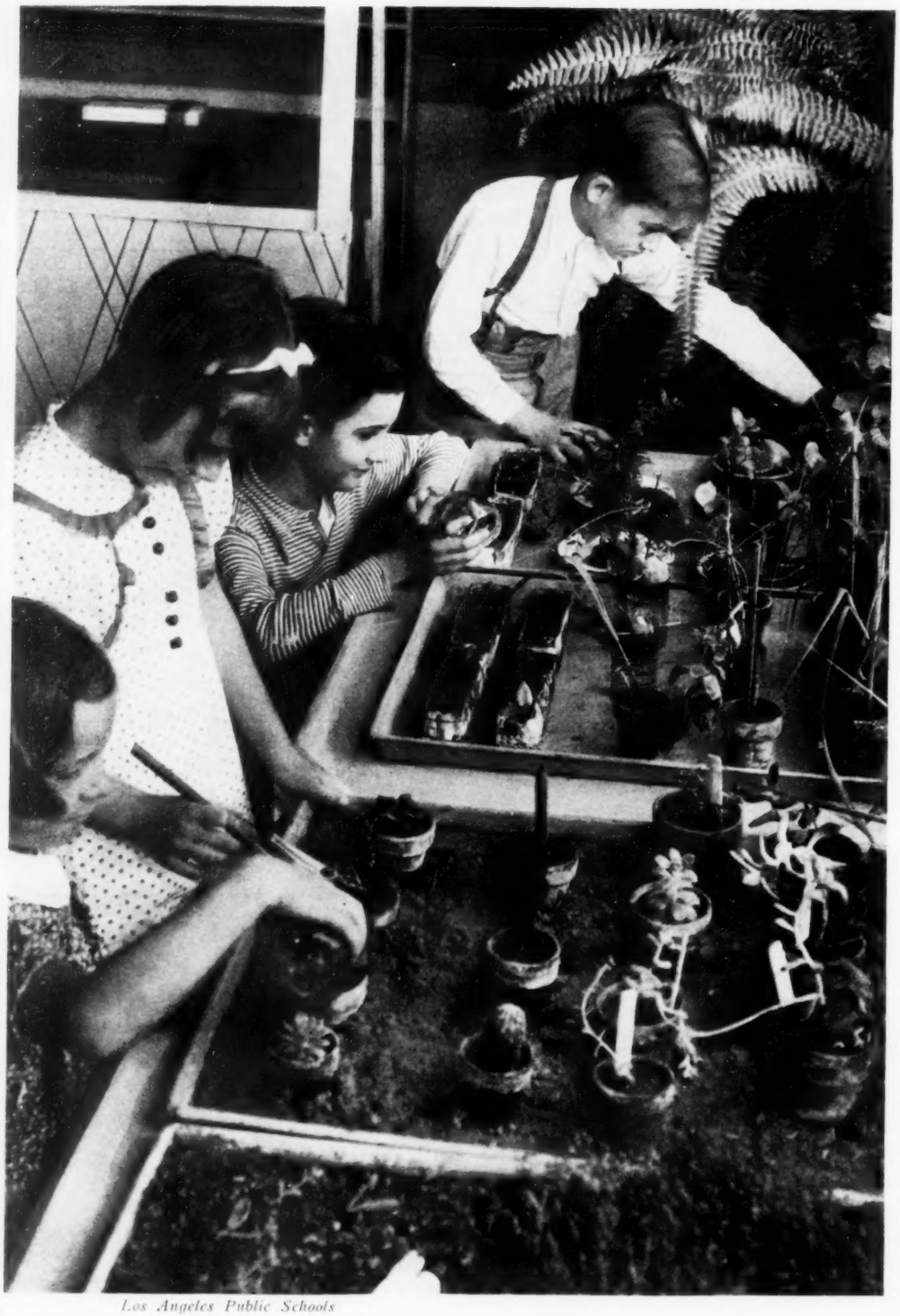
IT IS SAID that children in the arithmetic classes of one of the dictator countries do not add two apples and two apples to get the sum of four apples but add two bombs and two bombs to get the sum of four bombs. In chemistry courses the older children study poison gases. Every child is being taught from the point of view of the proper behavior "at the front," that is, all are being prepared for war.

In a democracy, the words "at the front" take on an entirely different meaning. Here they refer to the child's ability to make his way in the kind of world in which he is likely to live. They refer to his ability to make the best possible adjustments to thousands of situations. Among the many adjustments which every boy and girl will have to make are those afforded by the world of work and by people. Included in the latter is the ability to get along with the opposite sex.

This idea in education is being clarified by the mental hygiene movement, which was inaugurated as a result of the personal genius and organizing ability of Clifford Beers. Thirty-one years ago he wrote "The Mind That Found Itself."[1] Using this book and the interest resulting from it as a springboard, Mr. Beers founded the National Committee for Mental Hygiene. The committee started out to reform the "insane asylums," and it succeeded so well that a visitor to some of the modern institutions for mental disease today gets the impression that they look like colleges and sees that they abound with sympathy, kindness and the latest technics for helping their patients.

The World War gave a new impetus to the mental hygiene movement, which has grown to

1. The book may be obtained from the National Committee for Mental Hygiene, 50 West 50th Street, New York City. Price $2.50.



Los Angeles Public Schools

One way for all the children in the class to be prepared for life is by means of wholesome living and participation in various activities in the schoolroom, as for instance, gardening.

worldwide proportions. Its principles of cure and prevention are being applied to a variety of the phases of life, including the church, the home, the playground and the school.

In schools, the principles of mental health are gradually being incorporated into the work of teachers, supervisors, administrators, boards of examiners and boards of education. Principals and other supervisors know, for instance, that it is difficult for a teacher to cultivate democratic relationships and tolerant attitudes in her class if the principal has not established similar relationships in the entire school. It is easier for a teacher to maintain good will between herself and her pupils if there is a feeling of friendliness and frankness between herself and her principal.

One of the most interesting changes I have noted during the last fifteen years is a change from a frontal attack on behavior problems to an indirect approach. History tells that George Washington advised Braddock not to make a

direct attack against the Indians but to fight in Indian style. Braddock, not trained in colonial warfare, made a frontal attack and lost his life.

A teacher gave an example of how a mother made a frontal attack on the behavior of her son, Billy, who was troubled with enuresis. The mother threatened to make him drink "rat water," if he failed to control himself. The next morning she looked into his bed at 7 o'clock and found that his bed clothes were dry. She looked again at 7:30 and found that they were wet. When he awoke, she carried out her threat and made him drink what he thought was "rat water." Actually it was plain water with pepper in it. This frontal attack on his symptomatic behavior did not help the boy get well. It made matters worse. He was cured by a psychiatrist who did not fight the symptom but made an indirect attack through a study of the causes. When the causes were removed, the behavior cleared up.

The teacher who uses the indirect approach to maladjustment regards incorrigibility, blushing or other symptoms as calls for help. They are S.O.S. signals and mean that the child is in need of investigation into the causal factors. The search for causes involves as much of a study of the total child in his total setting as circumstances allow.

Among the causes of maladjustment and misbehavior are:

1. Trouble with eyes or ears or other physical defects.
2. Failure in reading or some other subject.
3. A general feeling of incompetence and inferiority. This may result from ridicule, criticism, punishment or from any group of incidents which makes the child feel that he is not accepted at home, on the playground or in school. He feels unwanted.
4. An oversolicitous home, resulting in overdependence or in excessive desire for attention.
5. Conflicts, especially those due to the bickering or the separation of parents.
6. Unwholesome attitudes around the child.
7. The child's unwholesome attitude toward his own problems.

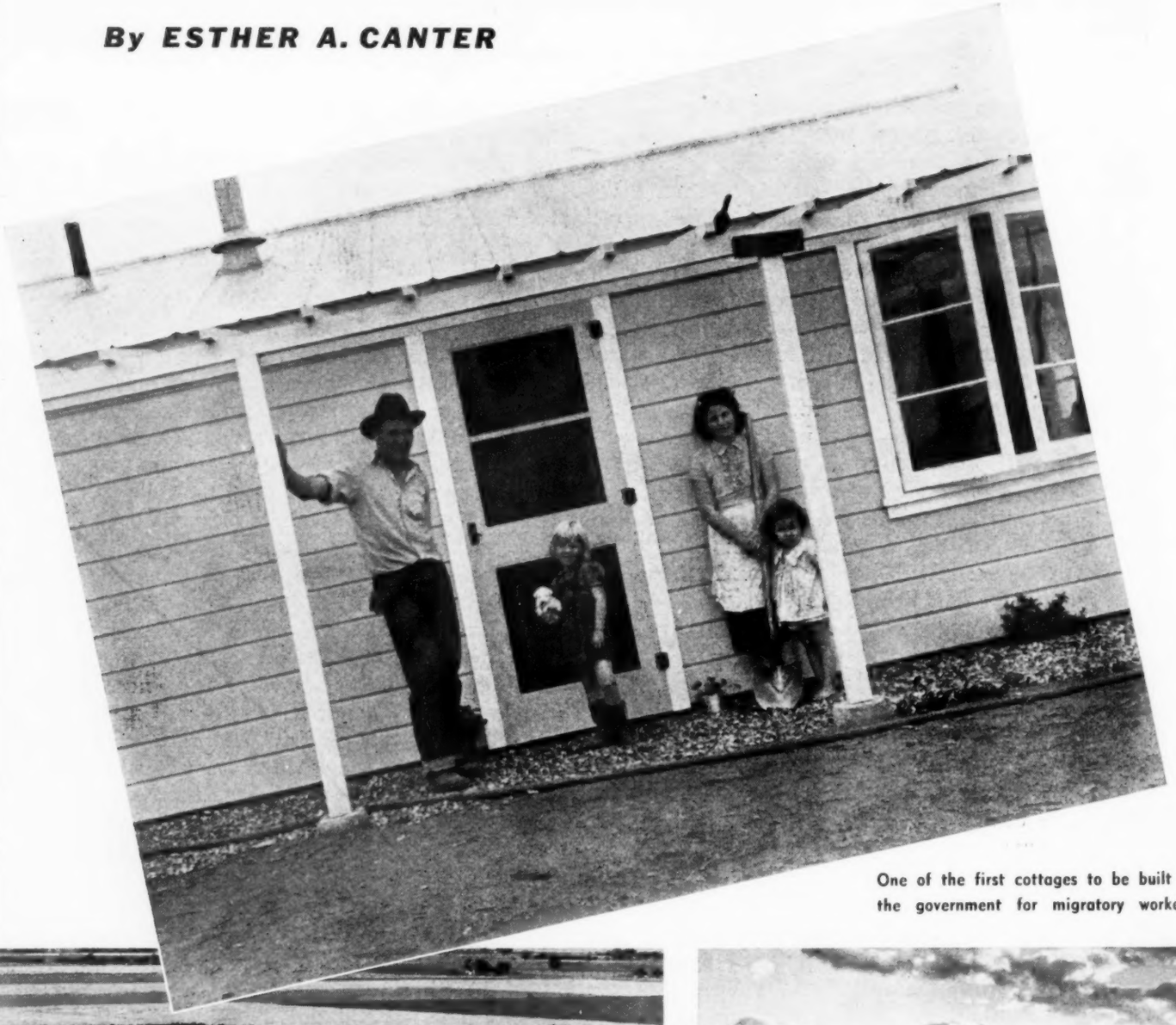
Unwholesome attitudes around the child can be illustrated by the story of Elizabeth. She was in a special class, and her teacher seemed to be the high-grade motherly type of person who was kindly and cheerful and had produced good results with other children. But Elizabeth seemed impossible. She was exceedingly restless and could not concentrate on anything. When visitors came, she tried to attract their attention in various ways. Her parents took her to a mental hygiene clinic, which after an extended study came to the conclusion that a great deal of the girl's bizarre behavior came from the fact that the boys and girls taking the regular school work referred unfavorably to her as being in the "Dummy Class." The psychiatrist recommended that the parents send her to a sympathetic private school where she would not be the victim of ridicule.

Once the cause is found, the obvious procedure is to remove it, if possible. To take one example, the New York schools discovered reading difficulties behind a large number of cases of misbehavior and maladjustment. As a result, the reading situations of these and other children were diagnosed, and a vast program of remedial teaching was undertaken.

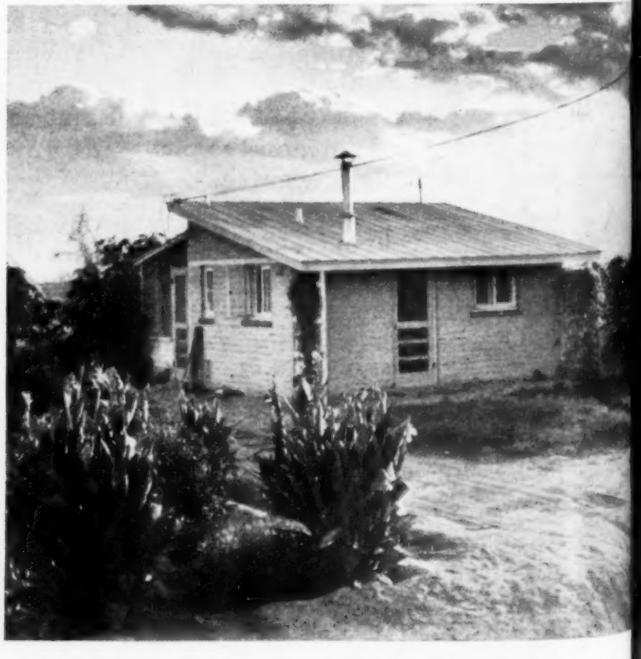
In many instances the teachers either cannot find the cause, or circumstances interfere with the cure. In such cases teachers are helping to change the attitudes of children toward their real or imagined difficulties. Children who are not as intelligent as others around them, who are too stout or too thin, or have long noses or projecting ears, feel inadequate and may resort to a variety of aggressive or submissive forms of behavior. The cause of their trouble isn't the disability itself so much as their own attitudes toward their failure to conform to other children. In many cases symptoms of maladjustment or misbehavior disappear when teachers succeed in helping the children attain wholesome attitudes toward their imagined peculiarities. The case of John is an illustration.

John's teacher noticed that he did the best written work and yet was the shyest child in the class. She noticed that he blushed and squirmed when he took part in discussions. She found out that he regarded himself as lacking in intelligence, but a test by a psychologist revealed that he ranked high. Then how to explain his attitude? Further study brought to life this situation: John was the third child in a group of four children. His older brothers had won scholastic honors, and all relatives continually praised the cleverness of his younger sister. Here was a boy who in his family life was hemmed in by brilliant children with whom he compared unfavorably. Comparisons are odious, and John's personality suffered as a result. The teacher helped him to judge himself not by others but by his own abilities and previous attainments. He worked out his own graphs showing his improvements in arith- *(Continued on page 458)*

By ESTHER A. CANTER



One of the first cottages to be built by the government for migratory workers.



Photos by Lange, for FSA

This general view of the Shafter Migratory Labor Camp shows the fertile California land in the distance, which these migrants help to cultivate. The "Garden Home" at right is a government project too and may be rented for $8.20 a month, including electricity and water.

CALIFORNIA "RENOVATES" the DUST-BOWLER

"HEY, nurse, how long is that there doctor goin' ter be here today?"

"Until 4 o'clock. And don't forget, Mrs. White, that your whole family is due for second shots of typhoid."

"That's what I wanted ter tell you. We jist got our grant checks, and we made pintments fer permilents this afternoon. We won't get away from the beauty shoppy 'til after 5. Can't he wait on us?"

"No, indeed. Doctor's time is valuable. Don't you think this is more important than being beautified right now? And he also wants to make some blood tests. Every one in camp should take advantage of that service."

"Oh, we don't want that! We don't need it. We're all as strong as oxes. When our blood needs anything we just take sassyparilla. Well, so long." Mrs. White slammed the door behind her and was gone.

Shrugging her shoulders, Judy Forbes dropped a handful of needles into the sterilizer. Today she would assist the state doctor with typhoid immunization. What a task it was to awaken the migrants to the importance of preventive care! Not even the fact that it was given free and that two typhoid patients had only last week been taken to the county hospital aroused their interest. Old Grandma Sykes retorted, "Why make such a fuss? Folks is expected to have tyford fever in the summertime." Others were "agin" having their arms punctured for everything that came along.

Judy heard the clinic door open again. The Wills family, all six of them, for pink-eye treatment. What chance for satisfactory recovery with a million gnats swarming all over the camp?

Mrs. Wills turned to her husband, "Take the kids on out now, Ike. I got sompin' to tell the nurse. Sh—sh— Say, I jist found out sompin', nurse. I'm expectin' agin. Got sompin' you can give me?"

At the meeting of the Mothers' Club in Arvin Camp for Migrant Workers, they are considering buying kerosene oil in large quantities and distributing it cooperatively to cut costs. At right, the doctor examines a child in the health clinic trailer which visits these camps.

"Nothing but advice on how to prepare for it and to get you under the doctor's care as soon as possible." Judy quickly took her history and painstakingly gave advice on prenatal care.

Following her to the door, the nurse placed in the hands of puzzled Mrs. Wills a neat, attractive booklet for expectant mothers. "Like as not I won't understand." Turning toward the door she added, "Gee, look at that new family comin' in. Sure looks like the woman was awful sick or sompin'. Takes two men to hep her walk. Look what a slew o' kids—worser nan our bunch."

Judy counted ten as they straggled in and lined up solemnly on the long wooden bench. "We heered about this here camp away back in Arkansas," explained Mr. Wood, "so we up and left ever'thing, so's you could take keer of we'uns, too—'specially my wife here." Shifting his cud of tobacco to the other side of his mouth he continued, "The man at the office 'cross there said we'd have to be looked at by the nurse. Be you her?"

"Yes. After I've filled out these admittance blanks, I'll take you back and check you over. We do that to all newcomers in order to keep serious diseases out. How long has your wife been in this condition?"

"'Bout two years, I reckon. She was as spry as a kitten when I married her three years ago. I found her in a lumber camp back home. Her old man—you see I'm her second man—had up and left her with his kids. Six of them's hissen's, and all us boys at camp felt sorry fer her. We used to drop around at night to cheer her up. Soon as she got her deevorse I married her. She ain't amounted to much since. Guess she warn't able to have my little tike there, causen hit ain't much good either."

The "little tike" was asleep when Judy took it, or so she supposed. Closer scrutiny, however, revealed that the baby was blind. Gingerly she turned back the little blue calico dress and unpinned a ragged bandana from its thighs. What chance had that wizened bit of humanity to find a real niche in the world? "Was your baby born blind?" she asked.

"My baby ain't blind. That's a veil over her eyes. She's goin' to be a prophet when she grows up," explained the mother.

"I'm sorry, but you'll have to believe that your baby is blind. I'll have to place you

The migratory family settles itself on the side of the road, pitches its tent and exists on what bits of work and wages it can pick up around the neighborhood.

The dust-bowlers pick up and pack up their belongings to depart for California. During the worst drouth years, these old cars were on every highway which led into that state.

folks in the isolation unit until I've had a test of your blood."

"Where is that place?" asked Mr. Woods anxiously.

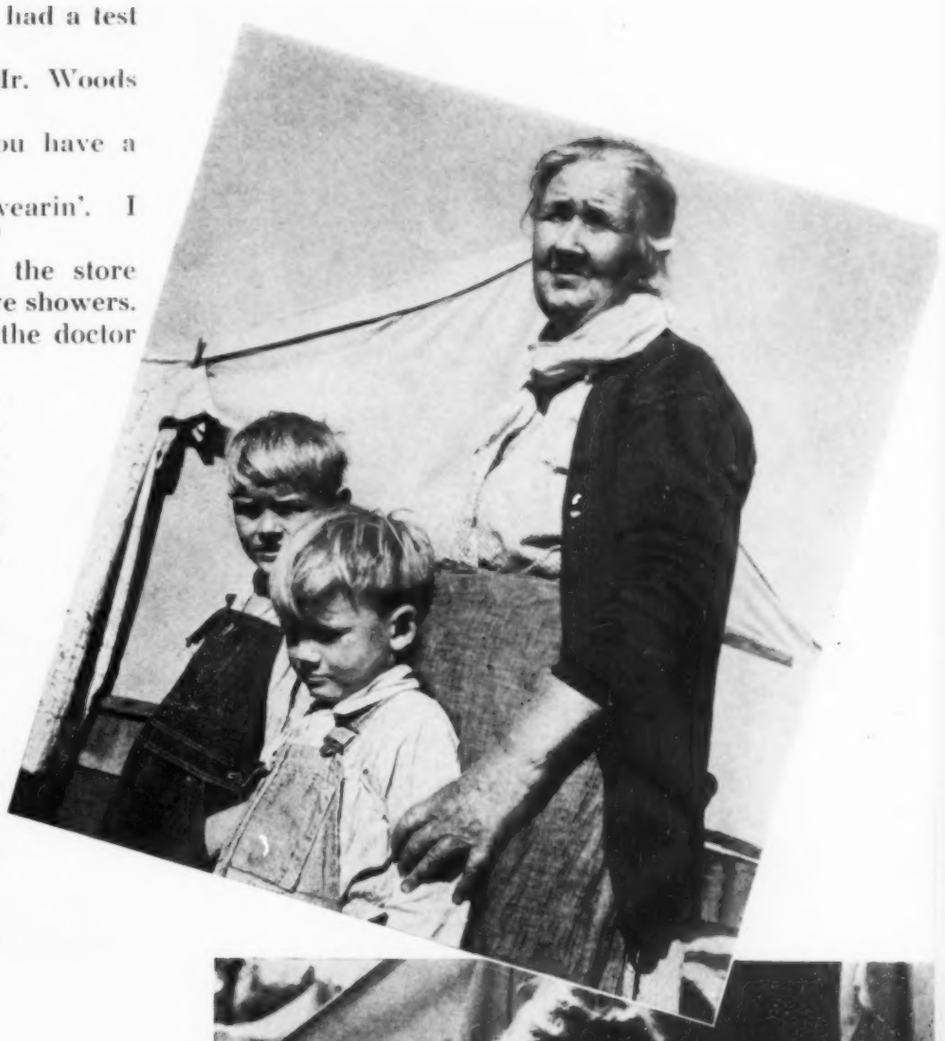
"Just back of the clinic. Do you have a change of clothing?"

"Nome. Just got what we're wearin'. I ain't had no work fer a long time."

"I'll have some sent over from the store room, then I want each of you to have showers. You must be nice and clean when the doctor examines you."

As Judy watched them pile into their already overloaded car her attention was drawn to the self appointed camp nurse, Jenny Martin. Something's gone wrong, she thought as she compared Jenny's hips to awnings shaking in a windstorm. "Say nurse," she panted, "you'll have to go to Unit 1. Mrs. Simpson's takin' childbed fever, I reckon. I done all I could, but she's gettin' ahead of me." She proceeded to roll a cigaret in brown paper and added, "If I coulda found a black hen, everything woulda been oaky-doaky."

"What good could a black hen have done?" *(Continued on page 454)*



Children of the migratory workers haul water back to the American River Camp at San Joaquin Valley, Calif.

There is always a large brood of children in these camps. The woman at top is grandmother to twenty-two of them and, below, a 19 year old mother begins her family.

Stephen Deutch

This baby girl was born prematurely and weighs only 2 pounds, 11 ounces. She is one of the infants who benefit from the supply of mothers' milk kept in reserve especially for them.

Saving lives with MOTHERS' MILK

In 1910 Dr. Fritz Talbot of Boston mentioned in an article the fact that a few ounces of human milk had been collected in a bottle and taken aboard the Boston Floating Hospital to be fed to very ill babies.

As early as 1907 a health officer in Brookline, Massachusetts, had been sending nurses into the homes of nursing mothers to get breast milk for immediate use by sick babies. Human milk bureaus were set up in Boston in 1910. It was in Boston also that there was first established a directory of wet nurses who would be on call to provide babies with needed mothers' milk. Later dried human milk was developed and was found to have excellent keeping qualities, being capable of storage for as long as five years.

B. R. Hoobler, now of Detroit, was working at that time in Bellevue Hospital. He noted many infants who needed breast milk, particularly among the premature infants, and also the fact that many mothers came to the hospital with more milk than their infants required. For that reason he established in New York a collection department where mothers who wished to sell their milk could dispose of the

1. Mothers ring for admittance at the milk station. 2. Each applicant is given a thorough physical examination, and the history of her family is taken and laboratory studies made.

excess supply and where arrangements could be made to collect the milk for babies who required it. Today breast milk stations are set up in many parts of our own country and, in fact, throughout the world. In 1910 the price for mothers' milk was about $15 a quart.

The amount of milk that a human mother may produce varies. It is recorded that one woman in New York City earned $1,700 in four years with a production of 400 quarts during the entire period. Certain mothers, of course, are able to produce much more breast milk than are others. Indeed, one woman earned $1,000 by the sale of breast milk and at the same time nursed her own baby with a supply of all that it could use.

In June 1930, means were developed for freezing breast milk, and it was discovered that properly frozen breast milk will keep for at least two years.

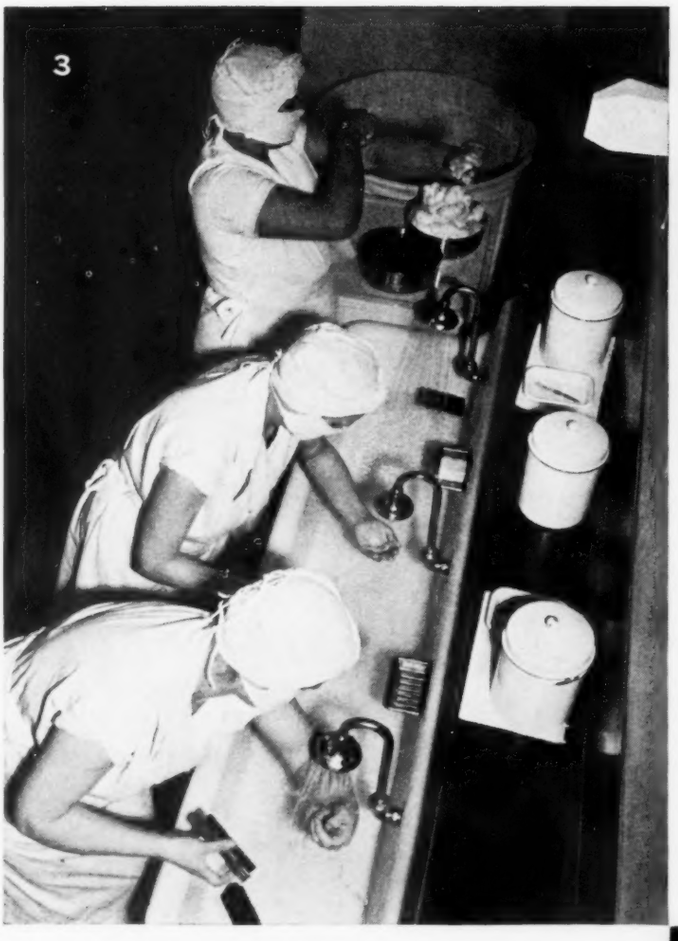
When the Dionne quintuplets were born, arrangements were made to send them breast milk from the Chicago station, and later they were supplied with breast milk from the hospital in Toronto. After about six months these famous infants were provided with evaporated milk. Again and again as breast milk has been needed for premature babies, it has been sent by airplane over long distances—in one instance from Boston to Omaha and in another instance from Boston to Indianapolis.

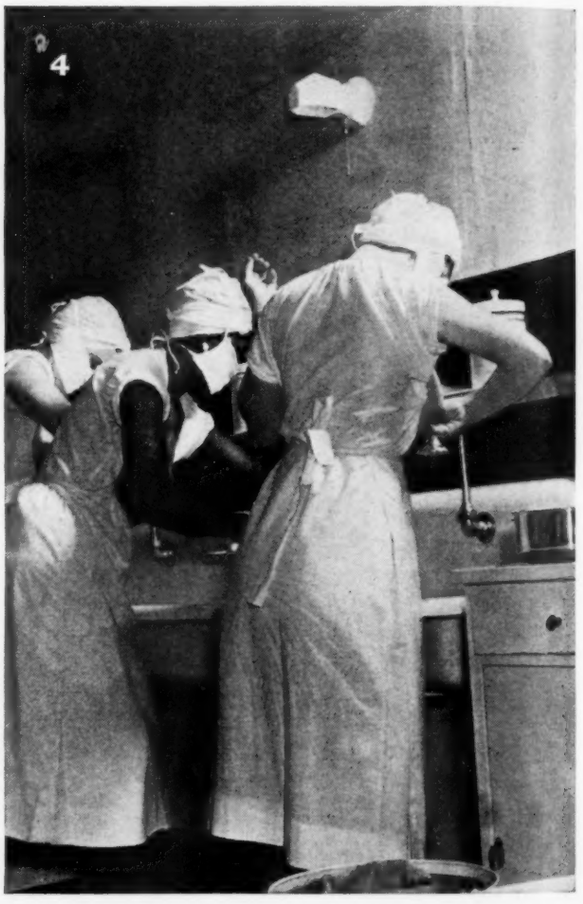
In many American cities the mothers' milk stations are operated through the health department—notably in Kansas City, where it was first established in 1929 by the Hospital Committee of the Woman's City Club; in Chicago, where it was first established in the Pediatrics Department of the Cook County Hospital in 1931; in Pittsburgh, where it was set up by the Magee Hospital and supported by the Junior League, and in Rochester, New York, where it was established in 1925.

In Chicago the mothers' milk station is operated by the Board of Health, and the work has been greatly systematized. For each visiting mother, there is col-

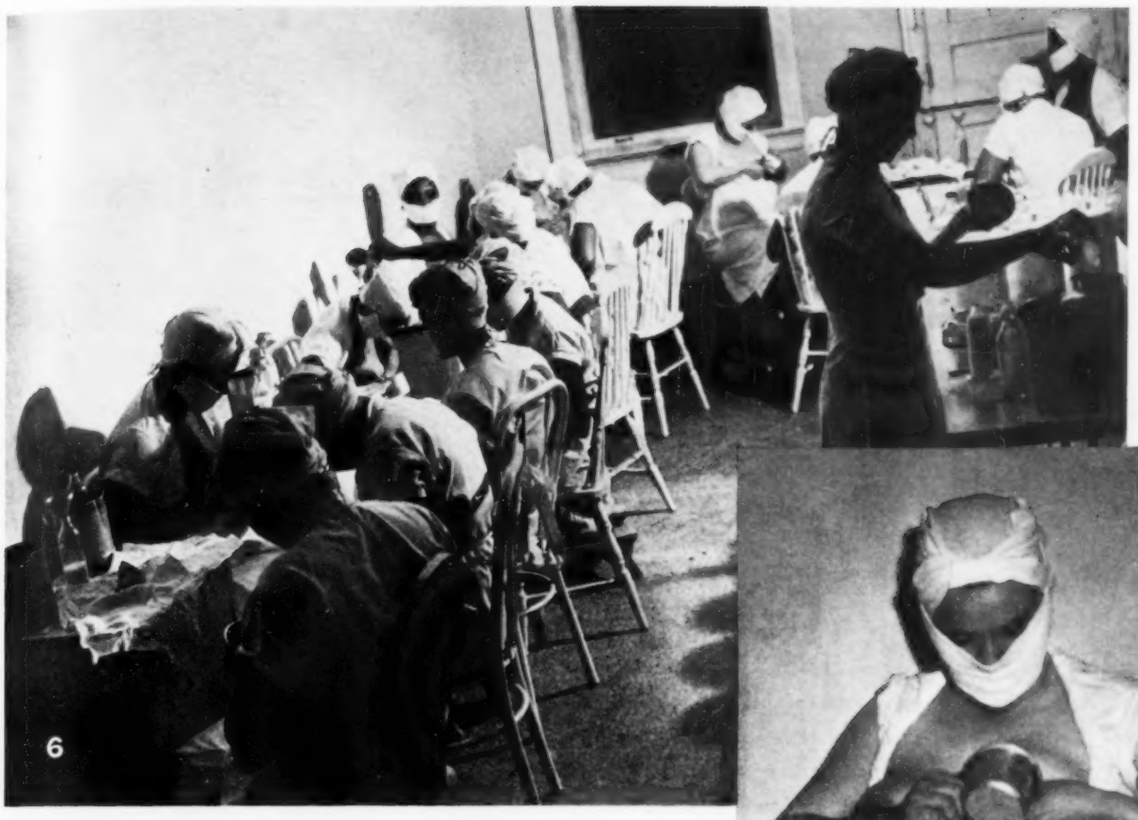
Scrubbing within an inch of their lives—

Next, if the applicant passes the rigid physical examinations, she prepares herself by scrubbing each finger, hand and arm three times (3). She must wear a sterile mask, cap and gown. Then (4) she scrubs each breast three times with green soap, and (5) she dries off arms and breasts with sterile towels handed her on sterilized metal tongs by one of the nurses in attendance.





lected a complete history as to her home, method of living, her personal history having to do with previous illnesses, and a complete study of various infectious conditions. There is also a complete record of her childbirths and a special study in relation to the family history as regards tuberculosis and various mental conditions. Then a complete physical examination of the mothers who propose to contribute milk is made. All the well established laboratory investigations are completed, and a record is kept of careful bacterial and chemical study of the milk from day to day. Each month another physical examination is given. During the year 1939, 277 mothers visited



the station and contributed 99,646 ounces of milk. Nine hundred and fifty-eight infants were supplied with this milk. Mothers were given transportation and paid for the milk at the uniform rate of 8 cents an ounce. They are all required to drink some cow's milk before leaving the station. The total cash received by the mothers for the milk supply was $7,940.84.

6. The mothers now are ready to express their milk. They sit in quiet groups and are given instructions for maximum expression. 7. This shows how the milk is caught in a sterile cup. 8. The milk is then poured into sterile bottles, and, 9, the nurse checks the amount of milk received from each mother.

10. Each mother must now drink a quart of cow's milk before she can leave, which insures the continued quality of her milk and her own nutrition. She must also show a certificate that her child is gaining properly, or she cannot continue selling her milk. She is then ready to go home. She has spent about an hour's time and earned about $1.60. Transportation money is given her by the station. 11. After the milk is collected, it is sterilized and, 12, put in sterile 8 ounce bottles. It is never touch by hand.

Wonder Stories of the Human Machine

Important for regular functioning of any machine, be it man or mechanical, are the safety devices which afford it protection. ***GEORGE A. SKINNER*** ***considers these in the eighth article of his series***

WHEN the automobile was first used, it immediately became apparent that extraordinary safety measures would have to be devised. While these safety devices have grown complicated, they seem exceedingly simple when compared with those necessary on airplanes, and the human machine has left both far behind in perfection and number.

Our five senses, seeing, hearing, feeling, smelling and tasting, are the safety devices through which all our contacts with our environment are provided and through which we are warned of any impending danger. But to assure this complete knowledge and protection there are many amplifications and combinations, so the protective devices of the human machine have become elaborate and highly efficient. As with the automobile, the mishaps of life are much more frequently due to our failure to heed warnings amply given than they are to the imperfections of the mechanisms that provide these warnings.

It is difficult to state which of the protective devices of any machine is most useful, for rarely does any one work alone. Yet if we were to attempt to determine this value we might consider which one of them on the human machine would be the hardest to do without. To some of us the answer would be the eyes. In all animate creation below the human form—except a few that live in darkness and need no eyes—the loss of the eyes is soon followed by death from starvation or attack of enemies.

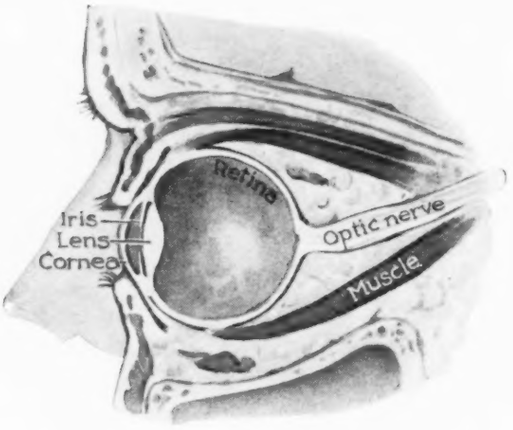
The eyes are most admirably constructed to insure safety of the human machine and provide it with information on all sides. If one is ever in doubt about how the eyes are used, he has only to acquire a stiff neck, and he will quickly learn the great degree of his eye motion.

In addition to this great range of movement, the eyes have a power of adaptation to various lights that is most unique. The delicate nervous structures at the back of the eye, the retina, may be easily damaged by sudden light. Light is a mighty force, and the protection required by these sensitive nerve endings must be constant and instantaneous. For this purpose there is a rapid action shutter, the eyelids, and a marvelous diaphragm which opens and closes to admit light as required. The action and coordination of these protective devices are controlled by reflexes. In addition, any foreign body in contact with the eye may damage it seriously; but that is largely guarded against by the rapid action of the eyelids due to the reflexes mentioned. If anything comes in contact with the sensitive membrane of the eyeball, the cornea, we note at once the pain and a sudden spasm of the eyelids. This is followed almost immediately by a flood of tears, a most admirable method of removing light materials quickly.

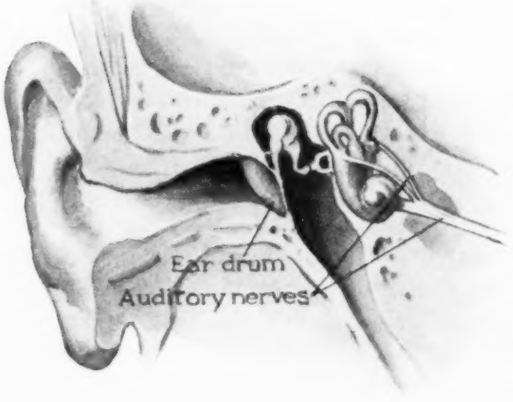
The eye has another power not found in mechanical devices. This is the ability of self adjustment of focus so that the sharpest vision possible is automatically maintained. This power is lessened with advancing years or through structural abnormalities in individual eyes. In such cases the vision may often be almost perfectly restored by the use of proper glasses.

The sense of hearing is another of the valuable protective devices used on the human machine. Practically every motion produces waves in the air, and these waves are translated by the nervous mechanism called hearing. We learn through experience that some sounds may indicate danger and at once act to protect ourselves. Thus a sudden noise immediately back of us will often cause a quick jump to

SENSORY DEVICES for SAFETY



The eyes are well constructed to insure safety of the human machine and provide it with information on all sides.

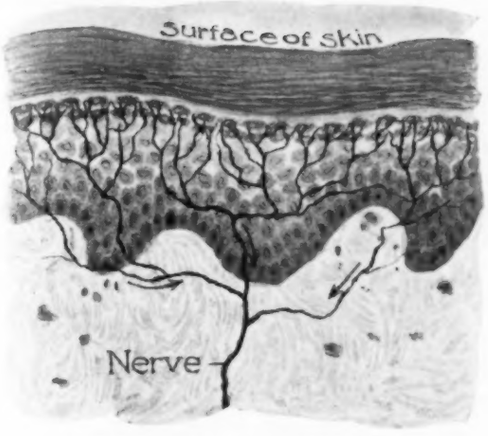


Practically every motion produces waves in the air, and these waves are translated by the nervous mechanism into hearing.

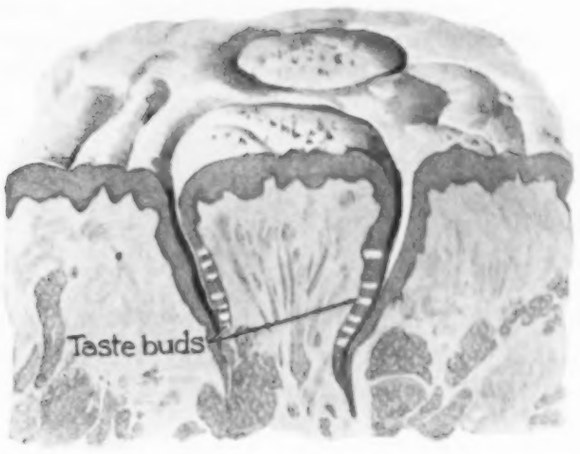
one side, and sometimes this action is just quick enough to avoid a speeding auto. We may not know why we made the jump; but the sound waves reached the inner ear, and through reflex control, the body was removed from danger.

The ear is a marvelous structure, but the part we can see is merely a collecting device for sound waves and has little else to do with the actual sense of hearing. The real mechanism lies out of sight within the skull. Sound waves are collected by the external ear, which is somewhat funnel shaped, and directed to the little canal at its base. This canal, the auricular, is about half an inch long and is closed at the inner end by a tiny drum membrane. Like all drumheads, it vibrates when struck. The sound waves strike it and set it vibrating. The vibrations are passed on through the tiniest bones imaginable to a small body of fluid, and this in turn passes the vibrations on to the ends of the auditory nerve. A complicated structure maintains air pressure equally on both sides of the first drum and a "position gage," semicircular canals, tells us which side up we are.

Severe and sudden noises close to the ear, such as explosions, might rupture some part of the delicate mechanism and lead to partial deafness. If the conducting apparatus (the drums and little bones mentioned) is damaged and the nerve is still normal, amplifying devices may either force the sound through the damaged drums and bones, often grown together or ankylosed, to the fluid of the internal ear, or will pass the amplified sound waves through the skull to the nerves. Thus any form of deafness that is not due to the destruction of the auditory nerve itself may be much improved by properly fitted hearing devices. Emphasis should be placed on "properly fitted," for it is as essential that the device be adapted to the person using it as it is for glasses to be adjusted to the particular eyes served by them. Moreover, the user must take time to learn to use these hearing devices, for after receiving his vibrations for many years over one accustomed route, a sudden change will require an adaptation of his nervous system to a new and entirely different route of obtaining these impressions of hearing.



In all parts of the skin, there are located tiny nerve endings that convey contact with the outside world.

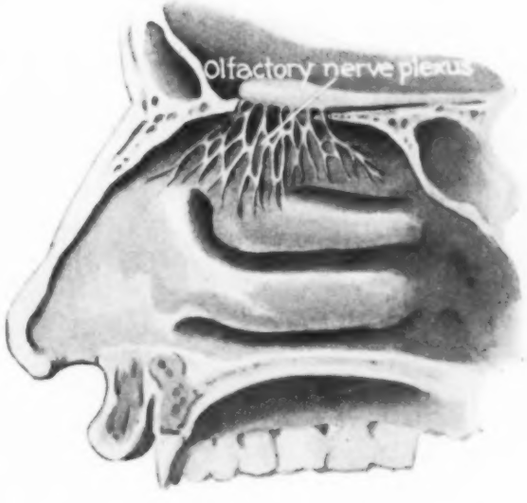


Taste is not such an important sense as these others; yet it is one that many persons enjoy the most of all.

In all parts of the skin, there are located tiny nerve endings that convey contact with the outside world. The sense of touch or feeling is a most important one, for without it we would always be liable to damage. Sensations of pleasure, pain, heat and cold come to us through this marvelous body covering. Each of these sensations makes us conscious of what is going on, and without them we would be unable to avoid many dangers. If a cold draft strikes the skin, we immediately feel the inclination to seek protection. Hot objects repel us, for we know by experience that too much heat will damage us. Pain is one of the most valuable alarms, for without it we would often neglect prompt action that is frequently necessary to save life. Perhaps it is the fear of pain more than any other one factor that makes us cautious. An acute pain in the abdomen may indicate grave danger, but it is the pain rather than the fear of other consequences that drives us to seek relief. We all dread pain and hence take precautions to avoid it. Otherwise, one of our best safety devices would be useless.

Taste is not such an important sense as these others, yet it is one that many persons enjoy the most. An old physician once said to me, "Most of the human race thinks more of the first three inches of its digestive tract than it does of all the rest of the body."

The sensation of taste is located in the tongue, lips and the lining of the mouth. This sense is protective as well as pleasurable and also indicates sensations of touch. By the sense of taste we are able to determine to some extent what is harmful to the body, but it is not always a safe guide. As a rule though, substances we use for food are pleasant to the taste, and this pleasure of food has much to do with the proper nutrition of the body. But it is also largely responsible for overnutrition and fat deposits that may be burdensome.



The sense of smell as a protective device has become less vital to the human being. It is now used more in conjunction with taste.

The organs of taste can distinguish heat and cold, as well as the many combinations of sensations due to the stimulations of the chemicals in our food, which we designate as taste. It is difficult to separate the sensations due to this actual contact with the food from those that arise from the volatile portions of it and which we call "smell." This sense is also a protective one, though in the human being it has largely become dormant. We do not depend much on the sense of smell for protection; some odors do warn of dangers, such as certain disagreeable materials near us or the

presence of gases or smoke. But it is of the greatest use to us in association with taste. Both smell and taste may be developed far beyond the average by proper attention to them.

Persons who work constantly in disagreeable odors quickly become unaware of their presence. Most of us fail to note the presence of odors through inattention; whereas, if we are "sniffing," their presence is often sensed at once. One odor that is rarely overlooked is smoke, for it carries a sense of dread, as fire is a constant menace to the race, and the ever present fear of it is subconscious.

A number of other safety devices exist in the human machine, valuable gages of the condition of its various parts. The sensations of hunger and thirst are warnings that the machine needs fuel. These sensations usually come on long before there is any real danger, because as we have seen, there are usually large reserves.

If the body becomes overheated (and too much heat destroys any machine), we become conscious of it through various signals. First, we feel warm, then start to sweat, possibly begin to feel oppressed and breathe hard. These warnings indicate that we must either decrease heat production or increase radiation at once, or the machine will cease to function. If due to the direct action of the sun we call it "sun stroke." If from artificial sources, it is spoken of as "heat stroke," usually not as dangerous as the former; but both require immediate attention to prevent serious damage or death. If the body is in a continuously high temperature, there are likely to be blood changes that result disastrously, but usually they are slow in developing and give ample warning.

Cold is more insidious in its action, and one may freeze a part, the ears or end of the nose, without being conscious of it until the reaction of "thawing out" comes on, when it is extremely painful. In exceedingly cold weather, exposed parts will freeze quickly. If the parts are frozen for any extended period, almost certain destruction follows. Such disasters are most commonly the result of exposures after overindulgence in alcohol, when a person partly or fully intoxicated loses his way or becomes unconscious in trying to get home on a cold night. Most physicians who have practiced in cold countries have seen such cases.

Fatigue is another important gage on the proper functioning of the human machine, although its warnings are not always noted or understood. Many persons are highly resistant to fatigue, and this resistance develops through training. When one is accustomed to certain activities he is not easily tired, but sometimes fatigue comes on without being recognized. It is important for each of us to know his own limitations and to recognize the warnings he receives. Such warnings vary much with different persons. It may be expressed by tired eyes, a headache, drowsiness at unusual times, especially after eating, or possibly by general irritability and restlessness or "fidgeting." Often proper rest will remove all these troubles.

These various warnings come to our notice through the marvelous electric system. We noted that the big brain (cerebrum) was in general control of the body but that it had many assistants to take charge of minor activities. Among these, some are located in the spinal cord, and because of their nearness to many parts of the body where the nerves, or electric lines, spread out to reach the muscles, they can act more quickly. This short circuiting to one of the smaller brains, or nerve plexuses, is called "reflex action" and is in use continuously. We constantly make motions that we do not at once know the reason for, but they are usually protective. A common one is the sudden winking just in time to avoid a little particle entering the eye. We may stumble, but before we have time to think, the hands are extended to break a possible fall. We place the hand on an object not known to be hot and instantly jerk it away. We hear something approaching unexpectedly from behind and jump to one side or turn around. The sudden smell of smoke startles us, perhaps so much that we commence to sweat. The shout of "fire" instantly arouses us to action. All these responses are due to long training of the reflexes, which are constantly on guard to protect us, and without which we would have little chance for survival.

These safety devices are intercommunicating and assist each other. If one is lost, the others attempt to compensate, but such loss always handicaps the machine to some extent. We lose our vision but may learn to read by the sense of touch. As our hearing becomes less acute, we watch the movements of the lips and may learn to follow conversation accurately. If we partly lose touch sensations, all other senses unite to supply the deficiency when possible.

On these devices we must depend for the safety of the human machines. Proper observation of their warnings will do much to keep these machines at their best.

Do You Know POISON IVY?

By ELIZABETH CHAVANNES

SO YOU hiked through Fisher's woods this afternoon. Then do not be surprised to wake early in the morning with your hands and arms red, burning, itching. Two out of nearly every three persons in the country are susceptible to ivy poisoning. Why should you not be one of them?

Because you know the plant and did not touch it? Because you bathed after returning home? Because you are naturally immune? None of these is a valid reason why tomorrow you will not be made uncomfortable by the itching and burning and blisters that spell poison ivy to 60 or 70 per cent of adults the country over.

Preventives and remedies have been accumulating for hundreds of years, ever since Capt. John Smith first described poison ivy in the New World as "a poisonous weed, being in shape but little different from our English yvie; but being touched causeth reddness, itchinge, and lastly blysters, the which howsoever, after a while they pass awaye of themselves without further harme; yet because for the time they are somewhat painefull, and in aspect dangerous, it hath gotten itselfe an ill name, although questionlesse of noe very ill nature."

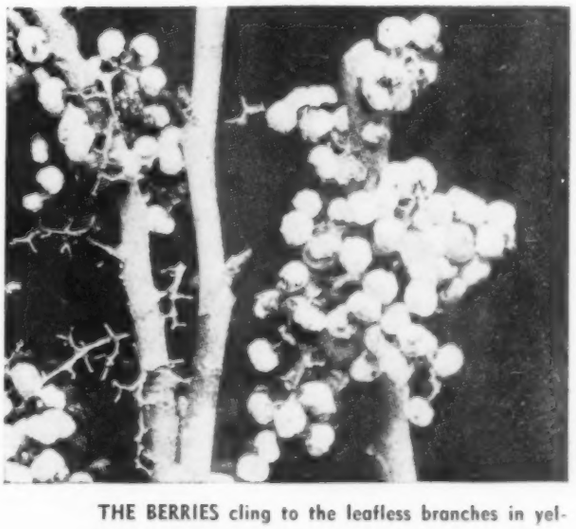
But the ill name persisted, and even today medical men are forced to admit that they know only one answer to all the questions of the cause, prevention and treatment of ivy poisoning. That answer concerns the only certain preventive: Stay away from poison ivy.

But staying away is difficult. Hedgerows, fence corners, thickets and woods abound in poison ivy—from Canada southward, well into Mexico. The plant is deceptively variable in appearance. It may be a small low shrub, a thicket of plants man-high, a vine climbing over bushes or up tree trunks. Sometimes the three-parted leaf is toothed along the edge, sometimes plain.

Any one who works or plays outdoors should arm himself with the ability to recognize the

THE FLOWERS are green and appear in bunches on the poison ivy in the late spring and early summer.

THE LEAVES, grouped in threes, may sometimes be toothed along the edge or plain—but all are poisonous.



THE BERRIES cling to the leafless branches in yellowish white clusters well into the winter months.

plant instantly. In summer three leaflets betray the presence of poison ivy; in winter it is the bare stalk surmounted by a cluster of yellowish white berries. With this knowledge the careful person is amply protected.

The change of seasons has no effect on the nature of the poison. It is contained in the milky substance flowing through resin canals in the same tissues that conduct food materials back and forth in the plant body. The poisonous principle enters the roots, stem, leaves and flowers, and when the plant is wounded the sap oozes out, hardening and blackening soon after contact with the air. Only the anthers and their contained pollen lack resin canals, hence poison. Because the sap flows the year around, poisoning can occur at any time. It is unfortunate that those months when the plant and leaves are more succulent and easily bruised are the same months when the outdoors is most inviting for walks and picnics. Thus it is not surprising that spring and summer are thought of as "poison ivy time." Not only are there more contacts with the plant, but also there are increased chances of bruising it and loosing on clothing or body some of the white sap.

In autumn the leaves color orange and red, but woe to the individual who gathers them for a bouquet, rather than those from a plant such as the harmless smooth sumac, a larger shrub with many more leaflets and greater clusters of dark red berries.

There is no less danger of poisoning in the winter time. Many are the farmers who have thought to rid their hedgerows and woodlots of poison ivy during snowy months on the assumption that the leafless stems held no poison. Not only is it still present and still active, but the task is made even more thankless by a tangle of underground stems which make the eradication of poison ivy nearly impossible. Each piece of root or stem left in the ground will sprout again in the spring.

Yesterday you walked along the woodland path and turned aside for only a few feet to admire a lady's-slipper. There was no contact with poison ivy. But what of the shrub you pushed aside, the vine-covered tree you fell against as you stumbled over a root? Remember the acrid smoke and the ash particles floating in the air as you passed the farmer burning brush. What were those sticky black stains on your boots when you drew them off? Ivy poisoning often comes more subtly than by rubbing the leaves over one's hands or absentmindedly chewing a piece of stem.

The poison contained in the milky juice is a nonvolatile compound called "toxicodendrol" from Toxicodendron, the Latin name for poison ivy. Composed of carbon, hydrogen and oxygen, it is similar to carbolic acid. An incredibly small amount can produce a typical ivy poisoning, so think of the possibilities in a clothing stain carried by hands to other parts of the body, a bit of poison volatilized by burning and recondensed on a particle of ash, dusty bits of dry plants floating on the wind. Of such simple things is ivy poisoning born, entering the body by touching, by breathing, by swallowing.

In the face of this, where is one to turn for a preventive?

"The only sure way to prevent ivy poisoning is to avoid all close contact with the plant and, in addition, avoid touching shoes, clothing and other materials which have just been in contact with it." This is the unqualified answer to all requests for the "best preventive" made to dermatologists [skin specialists].

However, there are several "preventives" which should be used as soon as possible after the toxicodendrol has come in contact with the skin, or if contact is suspected. A thorough washing with ordinary laundry soap and water will neutralize the causative agent and prevent the development of ivy poisoning. So will washing with gasoline or benzine. Some find that a solution of iron chloride in alcohol is useful in preventing the action of poison ivy oil, but this is in disfavor because of the unsightly brown stains it leaves. In any case, it should be reaffirmed that there are no methods of preventing poison ivy other than staying away from the plant.

After the rash has begun to develop, the question of combatting the condition arises. What should be done to allay the itching? How can one stop the spreading redness and swelling of the affected areas? What is the best way to treat the blister formation?

In general, the treatment of poison ivy is designed to relieve the itching and tension of the skin, to afford surgical drainage, to reduce the degree of inflammation and prevent the development of secondary infection. Depending on whether you have a mild or severe case, treatment of the rash will be continued over a period of several days or even a week or more.

One general rule in treating poison ivy is to apply plenty of warm, moist compresses and to avoid the use of oils and greases if blisters have formed. Medical aid is advisable if the rash is widespread or infected.

It should be remembered that actually ivy poisoning is a chemical burn and that its treatment should be similar *(Continued on page 461)*

American Camping Association

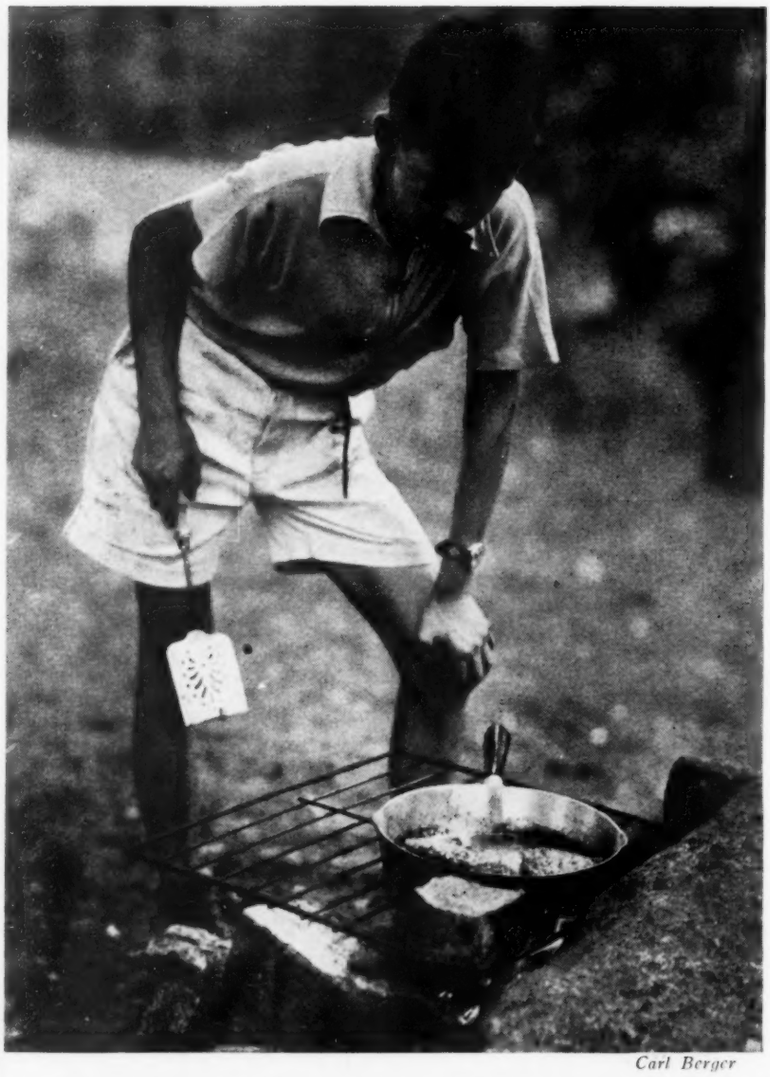
2,000,000 Children Away from Home

Summer camps will take that many young patrons away from back yards and streets this summer. Have you decided yet whether to let your child partake of the advantages of camping? Find your answer in this article by **ROSS L. ALLEN**

TWO MILLION boys and girls will leave for summer camps before many weeks have passed, and between five and six thousand camps are now busy preparing to make their stay a joyous, recreative and educational experience. But for Mother and Father, too, it's an experience trying to decide whether to let Johnny and Jane go away for two months under the guidance and supervision of some one with whom they are not so well acquainted. There are many problems confronting parents in this decision as to whether they should permit their youngsters to go camping.

Should we send Johnny and Jane to camp? Perhaps some of the suggestions offered here will facilitate a solution to your problems.

In the first place, what can camping do for them? Do you, as parents, realize the importance of camps in influencing the present and future behavior of those 2 million sons and daughters who will be camping this summer? Yes, the camps are prepared to offer a good time to the youngsters. In fact, joy of living might well be listed as their primary objective. But what else? Camping should provide an educational experience for youth that will result in the fulfilment of the individual child's capacities and interests. It should help to change his habits and attitudes to bring about a greater appreciation of wholesome and complete living. It should facilitate the growth processes of the child—mentally, socially, emotionally, physically. It should develop in the



Carl Berger

child an appreciation and desire for natural, rugged living—for camping is a way of living. The camp directors, similar to you as parents and to the teachers in school, can guide Johnny and Jane to find for themselves a satisfying mode of living, which is needed so much today. If you are thoroughly convinced that camping can provide so many assets, what's next?

Have you asked the youngsters whether they want to go camping? To make camping a truly happy and wholesome experience, the children themselves must desire to participate wholeheartedly in the activities of camp. In many cases, children who are forced to go to camp make poor campers. One should have little sympathy with the parent who sends his child to camp merely to get rid of him during the summer season. The "problem" children in camp are often those who have come, not by their own choice, but by that of their parents. True, many will develop an interest in camp life that will be of inestimable value in directing their lives.

This matter of child interest deserves considerable attention. The child must have an interest in camping, or else he must have the *will* to try this new experience. Interest in camping can be developed. Many city children have no idea what camping really is. Some of them believe it is primarily a continuation of the regimentation which they may have experi-

Acme

The activities of camp life may require first aid when the trail becomes too hard to follow.

American Camping Association

There is much to intrigue little boys about ropes and their management, when they get together.

enced in the schoolroom. To others, camps are places where the major goal is strict obedience; they were probably impressed by Dad's recollections of life in the Army camps. These negative impressions must be replaced; parents can help here, and so can camp directors. But the best way to show children what camp really is, is to give them the actual opportunity to go camping. A profound and worthwhile interest may result.

Assuming that Johnny and Jane are interested in camping (or are willing to try it), then what? Parents, after all, have some right to the joy of having their children with them during the summer months. Undoubtedly, this is a selfish, possessive idea; but it can be readily justified, or rationalized, if you will. In the busy winter months, Dad sees his children probably two or three hours each day—often

Philip Gendreau

Hiking is part of the program for physical development which is present in some form in all camps.

for a much shorter period. Breakfast and dinner usually find the family together. But Dad either has a business appointment shortly after dinner or is so tired from the day's work that he doesn't "feel up" to romping with the kids. He wants to, but physical and mental fatigue are just too much for him to overcome early in the evening. This situation is equally applicable to many mothers. Therefore, both Dad and Mother look forward to the summer vacation when they can be with their children and thoroughly enjoy family life for at least a few weeks. Parents have a right to this satisfaction, and the youngsters often look forward all year to their parents' vacation. In this case, is it necessary for parents to deprive themselves of filial association in order to send Johnny and Jane off to camp? But to bow to this situation does not entirely eliminate the chance for the boy and girl to experience the wholesome and joyous environment of camp. Perhaps a vacation for Dad and Mother can be arranged before or after the camp season; family camps which have facilities for adults and children may be the solution to the problem; perhaps a shorter term at camp will not interfere with the vacation of the entire family. In respect to the short term camp, it must be kept in mind that meeting the objectives of camping as stated earlier in this discussion requires considerable time. Shortening the stay at camp reduces in direct proportion the benefits which may be derived from camping.

Another consideration—and an extremely important one—is whether or not parents can afford to send their children to camp. Often Dad will "stretch" the budget unduly in order to send Johnny to camp. Unfortunately, such a procedure may result in the development of a family attitude toward camping which is undesirable. Having to slave and "skimp" all winter just to give the children the privilege of attending camp is a questionable procedure. Father and Mother both will feel that camp is a burden, and their attitudes will inevitably affect those of the child. There is usually some type of camp that every family can afford. It is the responsibility of the parent to figure accurately how much he can spend for camp for his children. Then, it is up to him to find a camp whose fees fit in that budget. Paying more than one can legitimately spend for providing a camp experience will benefit neither the child, the parent nor the camp. We must face reality, and nothing is quite so realistic as dollars and cents. There is a camp that will fit your pocketbook, and it is your responsibility to take time to find it. Certainly, the camp departments of some of the general magazines will help you in finding a suitable camp.

It is often the practice of parents to include camping as a luxury in budget making. Every other item is budgeted, and it is often felt that if there is anything left, there's a possibility that we might spend some for camping. It is just as important to send Johnny and Jane to camp as it is to send them to school. Therefore, camp should be considered and budgeted as a major item, not as a left-over.

A fourth consideration, and a vital one from the child's standpoint, is one that is too seldom given the thought which it deserves. All win-

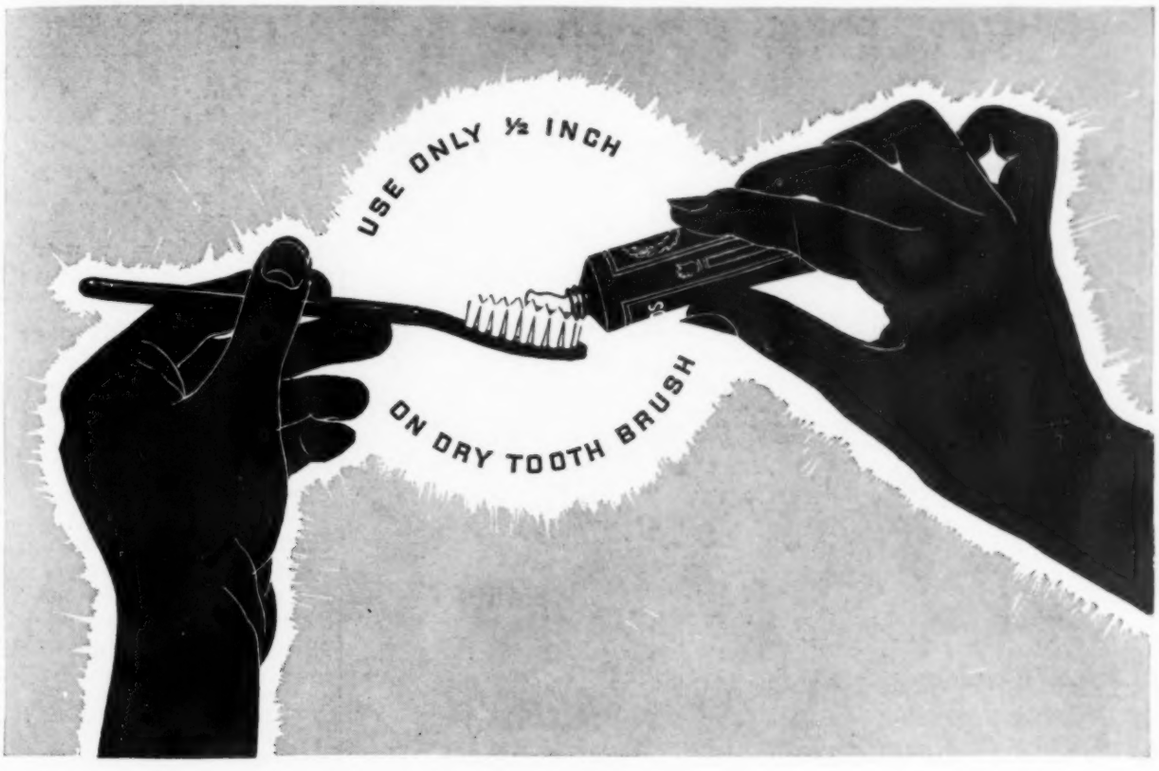
ter long the youngsters have formed friendships which have led to small social groups functioning and offering a most valuable experience in living for each member of the group. I refer specifically to the neighborhood group of children. For most children the association with playmates on the street, the satisfaction of recognition from the group, the opportunity for contacts of their own age and interest level and the opportunity to live adventurously mean real living for youth. It is the experience of many camp directors that one contact with a single family will often result in several youngsters in the same neighborhood coming to camp. This, of course, is an ideal situation for both campers and directors. It can be readily understood: Johnny is going to camp, but he's a little reluctant at first to leave his friends. However, he feels sure that Jimmy, Charlie and Don may get their fathers to let them go. Some strong coercion is put on Dad at this point, and the youngster usually scores a win for himself. As a result, this primary group which has functioned during eight or more months carries over into the remainder of the year. For the youngsters it merely means new and more varied living for the group; for the camp director it insures to a considerable extent a natural and homogeneous group which will enrich his program, lessen the possibility of homesickness, bring him more campers and lighten his administrative burden. So it is satisfactory to every one concerned.

Perhaps this desire to keep the neighborhood group intact will work a hardship on some of the parents; but this is not likely, for it is usually true that families in the same neighborhood have comparable socio-economic status. For some youngsters a change to another group may be an urgent need. A leader in one group at home may find himself a follower in another group at camp. The reverse may also be true. It is a fine experience in both situations, if they are carefully supervised and guided!

There are undoubtedly many more factors involved in sending boys and girls to camp. But one more phase of this problem is the child's physical, mental and moral development. Health is improved in most camps. Camping is vigorous living, and the normal child will thrive on it. Occasionally, we find the child who has serious physical defects or is recuperating from a serious illness. By all means, seek and heed the counsel of the child's physician in making a decision to send the girl or boy to camp. In many physical and mental conditions, sedentary, quiet and unexciting living is essential for the maintenance and improvement of the child's health. Any one who has camped realizes readily that the life of the camper is anything but a sedentary one. Of course, there are camps which are primarily and specifically organized to take care of the youngster who does not possess the best health. Here the program is adapted to the exigencies of the situation. But the majority of camps require that the child be in excellent condition; in fact, practically every camp demands not only a thorough medical examination of the prospective camper but in addition provides for routine inspections throughout the season. Youngsters slightly under par or handicapped can fit well into the average camp in which the leaders adapt the camp program to the individual needs of the child and not the child to the program. As a matter of fact, the return to complete health or the satisfactory compensation for a defect is often facilitated by participation with a normal camp group—not by segregation. The necessity for close cooperation between the parent, the physician, the camper and the director is apparent. Your family physician's advice should be secured and heeded *before* Johnny and Jane are told that they can go to camp.

The education of a child does not stop when school closes in June. Camps are educational institutions. The continuity of education throughout the year is one of the many reasons for the existence of organized camps. Provision for continued educational experience of a desirable nature should come into this decision of sending your children to camp. Most camp directors consider themselves as educators, and rightfully so. The parents, however, must be certain that the educational opportunities offered in a particular camp will be adequate for the continued all-round development of their children. Camp directors must be responsible for providing situations in camp whereby the child's education will go on progressively and fully. Here, again, we have the specialized camp for youngsters who are having difficulty, both socially and mentally. The average camp can and does adapt its program to insure for the social and mental growth of its campers.

What has been said of the physical, mental and social development of the child is equally true of the moral and spiritual aspects. The latter are truly of serious concern to parents and camp directors. Fortunately, the wholesome moral development of the child is assured in practically every camp in America.



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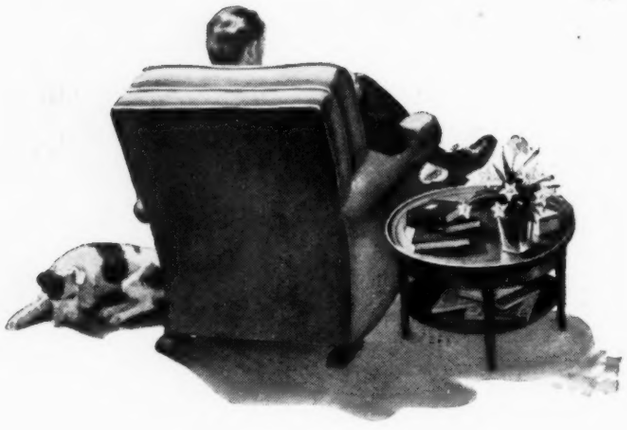
A healthful exercise you can take sitting down



EXERCISING for good health isn't entirely a matter of using and training your *muscles*.

Your mind needs workouts, too. And, agreeably enough, one of the most helpful mental workouts you can choose is perhaps the *easiest* exercise and the *pleasantest* prescription you ever took!

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▶ This habit of reading an hour each day will leave many things of real value in your mind—will widen your horizons, and give you new interest in your fellowmen and the world about you.

▶ And equally important, the hobby of reading is almost certain to be worthwhile *alone* for the relaxation it brings your mind and nerves. It gives you release from tenseness and worry, offers you recuperation from the things in your life that are tiresome, perplexing, annoying.

▶ Your life can be fuller and richer if you begin tonight to make use of the restful, refreshing mental exercise that reading offers you. An active mind is a healthy mind—and a healthy mind tends to stimulate a healthy body.

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HOW THE SURGEON SEWS

(Continued from page 398)

fluids in your stomach. Click! a weight drops. Up above, a clock registers the exact time it took for the strand to break.

There are twenty-three steps in the process of preparing catgut for the surgeon, which proceed in order until the catgut is wound on a reel; finally, when it is sealed in glass tubes, it is submitted to sterilization by heat—five hours of it.

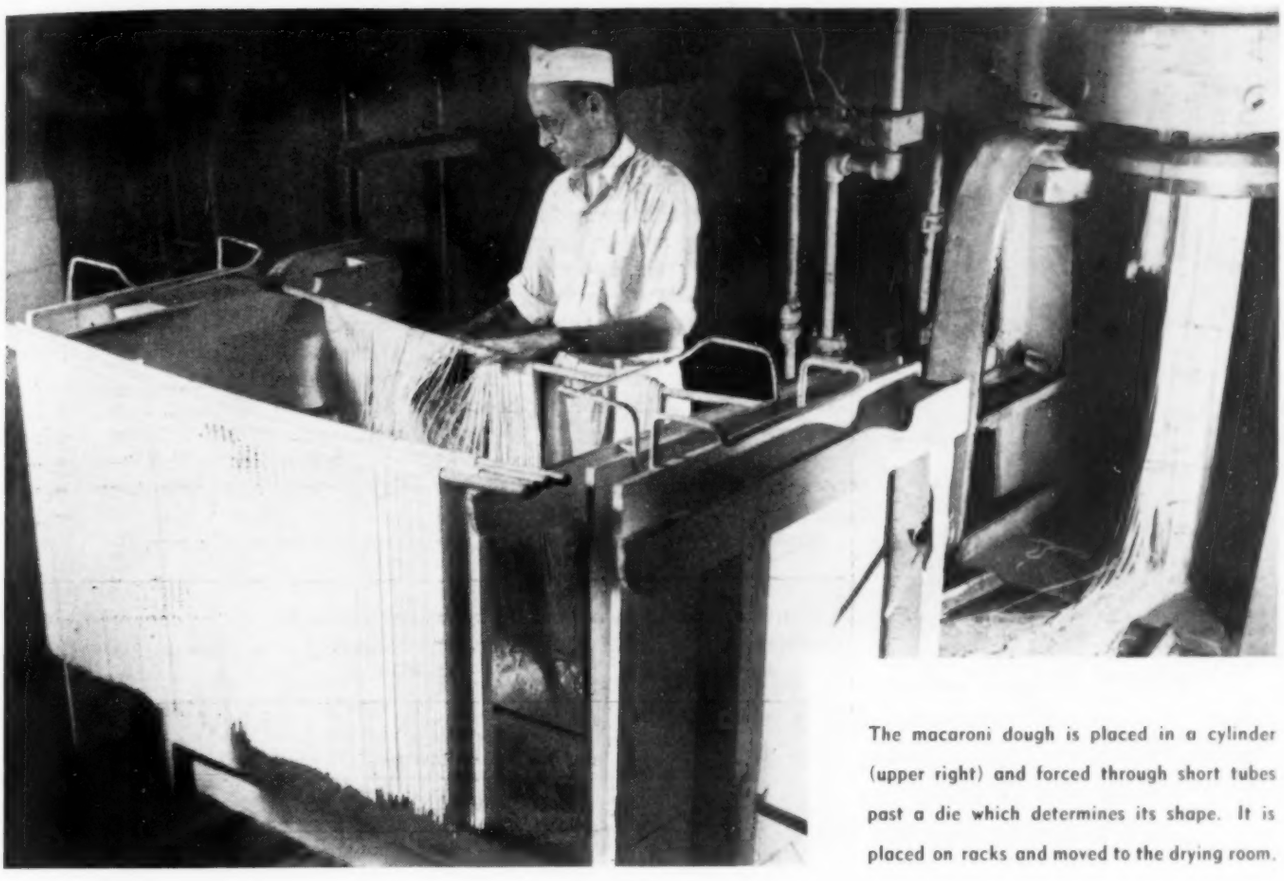
You'd expect that after such a thorough cooking, not a single germ could come out alive. But the manufacturer takes no chances. He locks the sterilized catgut in a vault and keeps it there until highly trained bacteriologists and biochemists make special tests on the contents of tubes chosen at random from the lot. Not one box of tubes is permitted to reach the shipping clerk till the report "negative for all bacteria" has come back. Only then is it ready for delivery.

Each year brings new methods to the aid of the surgeon's growing skill. There are, for example, the new ribbon sutures used in kidney operations today. Since the kidney has a tremendous blood supply, it doesn't take many needle pricks to cause a hemorrhage. The surgeons and the manufacturers put their heads together and evolved a flat suture like a ribbon. With this the surgeon can wrap the kidney up and not use the needle at all.

But whatever improvement is made in materials, the job of sewing is still up to the surgeon. His task may be simplified and made more trustworthy by new devices, but in the last analysis it's his plain and fancy needlework that turns the trick.

DEATH OF PHYSICIANS IN 1939

The average age at death of the 3,710 United States physicians whose obituaries were published in *The Journal* of the American Medical Association during 1939 was 66.1 years as compared with 65.6 in 1938. Heart disease was again the leading cause of death, as it has been for many years, being reported as a cause of death in 1,585 cases. Arteriosclerosis [hardening of the arteries] was second with 453 deaths, and pneumonia ranked third with 370.



The macaroni dough is placed in a cylinder (upper right) and forced through short tubes past a die which determines its shape. It is placed on racks and moved to the drying room.

Noodles, Macaroni, Spaghetti and Similar Products

THE production of egg noodles, macaroni, spaghetti and their variants is one of the big food industries in the United States. In 1935, over 600 million pounds were produced. Volume of production was second only to Italy. But the average American, according to government statisticians, eats only 4½ pounds of macaroni a year to the average Italian's 50 pounds.

Egg noodles, macaroni and spaghetti are wheat products. Macaroni and spaghetti differ from one another only in form, as each are made from the same kind of dough. This dough consists of white flour manufactured from hard wheat, water and salt. Some manufacturers use semolina or farina or both in combination with the white flour. Semolina is the more coarsely ground white flour (known in the trade as "purified middlings") of durum wheat, a variety of hard wheat. Farina is the coarsely ground white flour ("purified middlings") of other varieties of hard wheat. Semolina has more gluten, the elastic protein which forms gum when kernels of wheat are chewed, and less starch than the white flour commonly used in making bread.

The dough is kneaded under corrugated steel rolls, forced through dies containing holes of appropriate diameter and shape to form the various types of macaroni and spaghetti; it is then dried and packaged.

Macaroni itself comes in the shape of hollow tubes, about one fourth of an inch in diameter. There are different names for all the different widths of macaroni products. Macaroni $\frac{3}{32}$ of an inch in diameter is known to the trade as "Fovantini" or "maccaroncelli"; if it is ½ inch in diameter it is known as "zetoni." Solid rods, $\frac{3}{32}$ of an inch in diameter, of macaroni product are known as spaghetti. Vermicelli is only a third as thick.

Variants on these basic forms appear as alphabets, stars, bows, cockle shells, butterflies, daisies, elbows and hundreds of other shapes. The only limits to new and different styles are those set by the fancy of the manufacturer and the response of the consumer.

Quick-cooking macaroni has a thinner wall and a larger inside diameter.

Macaroni, in order to qualify as "milk macaroni," should be made with whole milk as the sole liquid ingredient. This would mean about 3 per cent dried whole milk.

Egg noodles must have eggs in them, according to federal standards. At least 5½ per cent, by dry weight, of egg solids is obtained by the use of whole eggs, or egg yolk, or a mixture of these. If they are made without eggs, they must be labeled "plain noodles," or "water noodles."

In the manufacture of egg noodles, definite proportions of flour,

egg yolks, water and salt are mechanically mixed and kneaded. The resulting dough is rolled by machine to required thinness, cut, dried on racks and packed in cartons. The standard shape of noodles is the ribbon.

Under federal standards, no artificial coloring matter may be used to touch up white or dull gray macaroni or noodle products sold in interstate commerce. Yellow Cellophane wrappers are likewise tabu. Their use is regarded as an obvious attempt to deceive the consumer.

Macaroni products are good sources of energy. A pound of dry macaroni furnishes about 1,600 calories. This is equivalent to about 100 calories for ¾ of a cup of plain boiled macaroni. Macaroni contains some protein, but the protein it furnishes cannot be relied on to build and replace body tissue. But macaroni is not usually served alone. Bland and without pronounced taste of their own, macaroni products combine well with many other foods, such as with cheese, meat and tomato sauce, with vegetables and with eggs.

Egg noodles have a slight added food value because of their egg ingredient. The egg, however, is a small proportion of the product, and in noodles with the minimum 5.5 per cent egg content, an 8 ounce package contains only the equivalent of one whole egg.

The composition of brands of macaroni and noodles accepted by the Council on Foods of the American Medical Association is given in the following table:

Product	Moisture per cent	Ash per cent	Fat per cent	Protein per cent	Carbohydrate per cent	Egg Solids per cent	Calories per ounce
Macaroni and Spaghetti.....	10	0.6	0.2	12.4	12.3	..	97-102
Milk macaroni.....	13	0.7	1.8	13.6	74.9	..	105
Cooked macaroni with meat sauce....	81.8	1.2	2	3.6	11.3	..	23
Egg Noodles.....	9-12.4	0.6-1.6	..	13-20	67.1-71.7	5.5-6.5	105-108

The following brands of macaroni, egg noodles and similar products have been accepted by the Council on Foods of the American Medical Association and are described in the book "Accepted Foods and Their Nutritional Significance," published by the American Medical Association.

Egg Noodles

Fairway Egg Noodle Products
Fontana's Egg Noodle Products
Foulds' Egg Noodle Products
Golden Age Egg Noodle Products
Golden Gate Egg Noodle Products
Jenny Lee's Noodle Products
Miller's Egg Noodles
Minnesota Egg Noodle Products
White Pearl Egg Noodle Products

Macaroni

Cel-Mac Macaroni Products
Fairway Macaroni Products
Fontana's Macaroni Products
Foulds' Macaroni Products
Golden Age Macaroni Products
Golden Gate Macaroni Products
Jenny Lee's Macaroni Products
Jenny Lee's Quick Cooking Macaroni
Miller's Macaroni Products
Minnesota Macaroni Products
Minnesota Quick Cooking Macaroni
Quaker Milk Macaroni
Quaker Quick-Cooking Milk Macaroni
White Pearl Macaroni Products

Spaghetti

Fairway Spaghetti Products
Fontana's Spaghetti Products
Foulds' Spaghetti Products
Golden Age Spaghetti Products
Jenny Lee's Spaghetti Products
Miller's Spaghetti Products
Minnesota Spaghetti Products
Quaker Quick-Cooking Milk Spaghetti
White Pearl Spaghetti Products

Other Similar Products

Nouron, dried granules of dough prepared from soybean flour, durum wheat flour and dried egg yolk.

Prudence Macaroni with Beef Sauce, cooked macaroni seasoned with tomato puree, onion, beef, olive oil, cracker meal and vegetable fat.

Veta-Roni, macaroni-like product prepared from durum wheat semolina, soybean flour, water, yeast and salt.

Flex-Seal

cooks food perfectly in 1/5 the usual time, using only 1/10 of the normal amount of fuel.

Flex-Seal cooks peas in less than 1 min., asparagus—½ min., carrots—2 min., cauliflower—1½ min., green beans—2½ min., and other vegetables equally fast. Beautiful natural garden colors are retained . . . flavor and aroma are enhanced.

Toughest meats are tenderized fast . . . you can cut them with a fork.

Flex-Seal is the original waterless method of cooking which holds the steam IN, and keeps the air OUT, to preserve the maximum in food values, vitamins and mineral salts.

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Watch Your Diet (2)
by E. M. Geraghty. 8 pages. 10 cents

Pocket Calorie Index (3)
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Several recipes for proper diet. 48 pages. 15 cents

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What The Council on Foods Has to Say About Bread

"Bread is a wholesome food that provides calories at a comparatively low cost. When it is regularly consumed in considerable amounts, it supplies an amount of protein which is significant in the diet. The proteins of bread are efficiently utilized but should be supplemented by other proteins of the diet, especially those of milk, eggs, meat or fish. White bread may be rated also as a fair source of calcium, phosphorus and iron and a good source of calories."*

*"Accepted Foods and Their Nutritional Significance." Council on Foods of the American Medical Association: Page 119, 1939.

• • •

Further facts about the food value of bread are presented in authoritative booklets, obtainable without charge from the American Institute of Baking.

American Institute of Baking

DEPARTMENT OF NUTRITION

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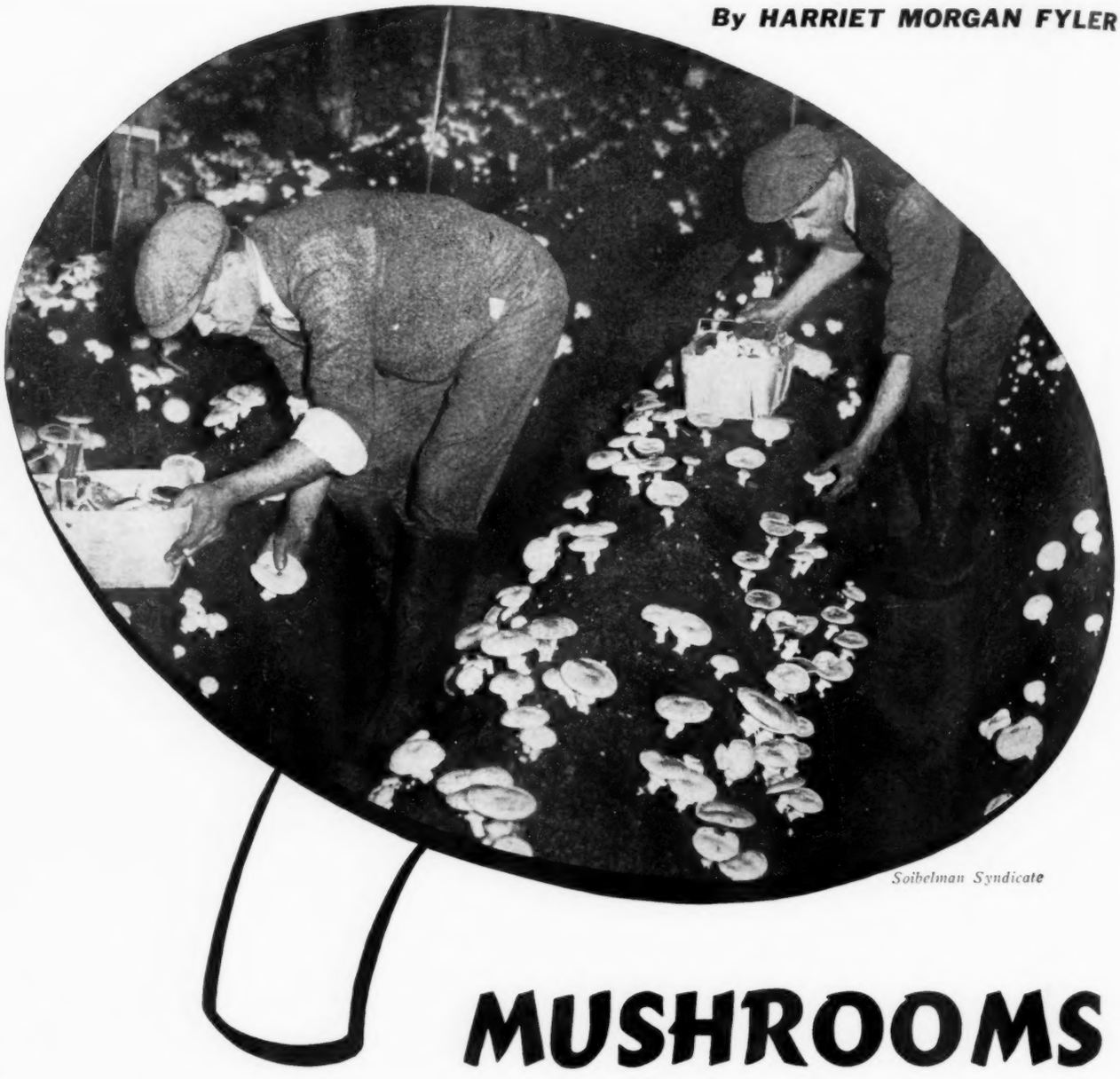
By HARRIET MORGAN FYLER



Soibelman Syndicate

MUSHROOMS for FLAVOR

ONE of the unfailing signs of spring is the reappearance of mushrooms in city markets. Mushroom is the common name for edible fleshy fungi, although strictly speaking the term includes both poisonous and nonpoisonous types that grow in meadows and pastures in the spring.

Many varieties of wild mushrooms are edible, but consumers with a yen for mushrooms should resist the temptation of personally gathering them for food. It is extremely difficult to distinguish between many of the edible and poisonous species, and a mistake may be fatal. Cultivated mushrooms are safe mushrooms.

The cultivation of mushrooms has become a flourishing industry. Delaware, northern Pennsylvania, Michigan and northern Illinois are important mushroom production centers which produce over 20 million pounds of mushrooms a year. The only variety of fungus cultivated in the United States on a large scale is the *Agaricus Campestris.* The white, brown and cream cap mushrooms which we see in our grocery stores are of this type. In Europe and the Orient many other kinds of fleshy fungi are sold. In Europe, it is cèpes and truffles; in the Orient, the shiitake and matsu-take are sold. Dried imported mushrooms are often of these species. America's mushroom industry dries very little of the product. The majority of it is marketed fresh or canned.

The growing of mushrooms is an exacting business which requires great attention to details in preparation and care of the beds. Improperly prepared top soil, poorly regulated temperatures or humidity may cause failure.

Mushrooms are usually grown in tiers of flat beds in specially in-

sulated buildings in which the ventilation, temperature and humidity are controllable. The mushroom develops from a threadlike growth called mycelium, or spawn. Good spawn is essential in mushroom cultivation. Most mushroom growers buy their spawn by the bottle from firms which specialize in making a pure-culture product from germinated spores collected and grown under the best conditions. The germination of the spores and their development into the cordlike strands of the mycelium is the first phase in the life cycle of the mushroom. Then follows the growth of the mycelium underground. The mushroom sprouts as a little globular "button," but as the cap (pileus) expands, the delicate veil covering its lower part breaks, leaving a ring (annulus) around the stalk and exposing the pinkish gills radiating from the stalk.

Fresh mushrooms are sold by weight usually in 3 pound baskets or in 1 pound paper cartons. There are federal standards of quality for mushrooms which growers and buyers use in trading. The grade mark usually appears on the container in which mushrooms are marketed at retail. To rate as "U. S. No. 1," mushrooms must be of the same type and color and not less than 1 inch in diameter. They must be well formed, free from disease, from open caps, insect injury, spots and damage caused by dirt. The stems must be trimmed and must not exceed 1¼ inches in length. Fresh mushrooms which do not measure up to these specifications are unclassified. If the mushrooms measure up to the quality requirements of "U. S. No. 1," the containers may be marked "Small," "Medium," "Large" and "Extra Large." "Small" mushrooms are defined, under these standards, as under 1 inch in diameter; "medium," from 1 to 1⅝ inches; "large," from 1⅝ to 3 inches, and "extra large," over 3 inches.

Canners prefer buttons, or small mushrooms. Button mushrooms are canned whole or sliced. Imperfect, cut or broken portions of stems and caps are canned separately and are cheaper in price. In the tentative U. S. grades for canned mushrooms, color, symmetry and uniformity of size are the most important factors in ascertaining quality.

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U. S. Grade A canned mushrooms must have identical characteristics, must be practically uniform in color, size and symmetry, with stems cut transversely so that the distance from the top of the cap to the end of stem does not exceed the diameter of the cap. The mushrooms must be practically free from defects, have a firm texture and a normal mushroom flavor.

U. S. Grade C canned mushrooms must have similar characteristics but may vary somewhat in color, size and symmetry.

U. S. Grade A and U. S. Grade C sliced mushrooms must meet the requirements of their respective grades. They must also be sliced parallel to the axis of the mushroom into slices of uniform thickness, approximating three sixteenths of an inch, with imperfect pieces removed.

Many extravagant claims have been advanced relative to the high nutritive value of mushrooms, but careful analysis does not warrant such assertions. A typical analysis shows that mushrooms are about 92 per cent water, 1 per cent ash, 1 per cent fat, 3 per cent protein and 3 per cent carbohydrate. The ash contains iron and copper. Mushrooms also contain some vitamin B_1; an average serving (3½ ounces, fresh) would furnish about 50 international units of this vitamin, or one sixth of the daily requirement. The nutritive value of mushrooms is increased by the addition of milk or butter when used in their preparation. While the nutritional value of mushrooms may be compared to certain vegetables, they are in no way a substitute for vegetables nor for meat. However, mushrooms play an important role as condiments, and as flavoring add greatly to the palatability of many foods.

Mushrooms come into their own as a garnish for meats, as an ingredient in soups, chicken à la king or creamed, broiled in butter or as an accompaniment to steak. Distinctive flavor has made this member of the fungus family a festive food since ancient times. The French chef exalts the mushroom. To him it is even more than a delicacy; it is almost a ritual of piquancy and gastronomic delight. By adding a cupful of fresh or canned mushrooms to a roast or a fowl, a French chef creates a rich flavor. Any cook with a flair for flavors can duplicate at least a part of the French chef's magic by using mushrooms.

For best results the mushrooms should be fresh and unwilted. Both the cap and the stem are good to eat. It is not necessary to peel them unless the skin is tough. Then it is best to use a glass or steel knife. Mushrooms should not be allowed to soak in water before they are cooked, as they quickly lose their flavor. When destined to be a simple garnish for a meat course, the mushroom should be sliced and browned in butter for about 5 minutes, mixed with water, lemon juice and salt. Other uses of mushrooms are described in the following recipes.

Chow Mein with Mushrooms

- 1½ pounds diced pork or beef
- ¼ cup vegetable oil
- ½ cup chopped green onions
- 1 cup diced celery
- 1 cup sliced mushrooms
- 1 can assorted chop suey vegetables
- 3 tablespoons chop suey sauce
- 1 cup meat stock or water
- 2 tablespoons bead molasses
- 1 tablespoon cornstarch
- Salt

Cook meat in vegetable oil over low flame for about 30 minutes. Add mushrooms and onions, and cook for five minutes. Add assorted chop suey vegetables except the bean sprouts, slicing the water chestnuts and shredding the bamboo shoots. Season with chop suey sauce and a pinch of salt. In a separate pan, thicken the meat stock or water and the bead molasses with the cornstarch. Add to the first mixture. Add the celery and bean sprouts and cook for 10 minutes. Serve with hot rice or chow mein egg noodles.

Creamed Mushrooms

- 1 pint mushrooms
- ¼ cup butter
- ⅓ cup flour
- 2 cups milk
- Salt and pepper

Wash mushrooms quickly (do not soak in water); do not peel unless caps are tough or discolored. Slice lengthwise if large, or cut in halves if small. Cook 5 minutes in plenty of butter in a saucepan over low heat. Add flour, and mix well; add milk, and cook, stirring until smooth. Season well, and serve hot on toasted slices of bread.

Sliced, hard-cooked eggs may be added.

Creamed Mushrooms and Ham

2 cups sliced mushrooms
4 tablespoons butter
4 tablespoons flour
2½ cups milk
1½ cups of diced cold, cooked ham
1 tablespoon chopped ripe olives
1 tablespoon chopped pimiento
Salt and pepper
5 patty shells

Cook mushrooms in butter in a saucepan over low heat for 5 minutes; add flour and mix thoroughly with fat and mushrooms. Add milk, and cook this, stirring continuously until smooth. Add remaining ingredients. Fill patty shells with this mixture, and serve at once. Serves five.

Mushrooms and Oysters in Ramekins

2½ tablespoons butter
¼ pound mushrooms
1 tablespoon flour
1 cup milk
Salt and cayenne
1 egg yolk
20 medium sized oysters
Bread crumbs

Melt butter in a saucepan, and add to it the mushrooms, which have been washed and sliced. Cover, and let simmer slowly until tender; add flour, and when well mixed, pour in milk. When the sauce begins to thicken, add salt and cayenne to taste, and stir in the well-beaten yolk of egg. Cook for a minute longer, stirring all the time. Drop in the oysters, and as soon as they are well mixed with the sauce, fill ramekins with the mixture. Sprinkle with fine white bread crumbs moistened with melted butter, and bake in a hot oven (400 F.) until the bread crumbs are browned.

Mushrooms au Gratin

4 tablespoons butter
½ pound mushrooms
1 finely chopped onion
2 tablespoons flour
2 cups milk
½ cup bread crumbs
Pepper and salt
1 cup grated American cheese

Melt fat in saucepan, add onion and the washed and sliced mushrooms, and cook over low heat until browned. Add flour, and mix thoroughly with mushrooms, onions and fat. Add remaining ingredients, except grated cheese, and cook until thickened. Pour into baking dish, sprinkle cheese on top and bread crumbs on top of cheese, and bake in a hot oven (450 F.) until slightly browned. Serve hot.

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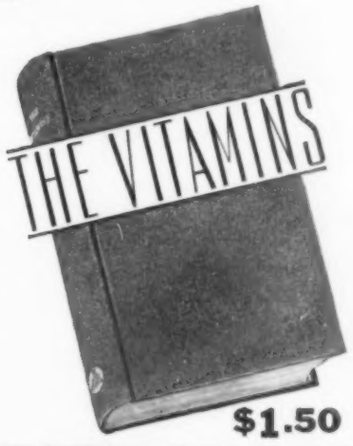

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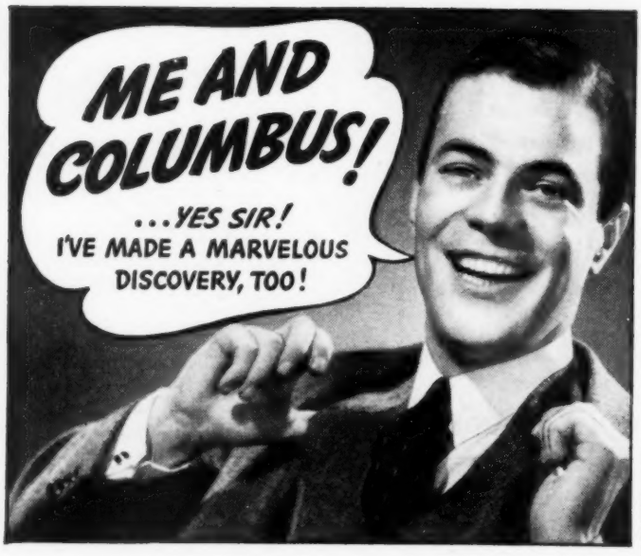

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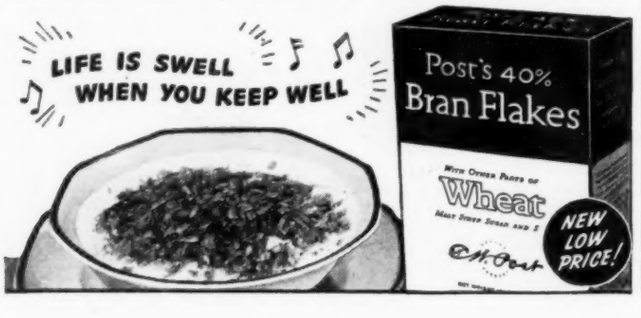
SAM: You sure were right, old man—I've been eating those swell-tasting Post's Bran Flakes every morning for six months, and believe me, I never felt better in my life!

CHRIS: You said it, Sam! It's a great thing to find a cereal that tastes so *good* and gives you important *extra benefits* as well!

IMPORTANT: Post's Bran Flakes, due to their bulk, are a *regulative* cereal. Constipation due to insufficient bulk in the diet should yield to Post's Bran Flakes, eaten regularly—as a cereal or in muffins. For cases not corrected in this simple manner, a physician should be consulted. Post's Bran Flakes are a Post Cereal—made by General Foods.



QUICK-FROZEN FOODS SHOW LITTLE NUTRITIONAL LOSS

Quick-frozen foods,' when properly prepared and stored, show little vitamin and other nutritional losses, Mary Swartz Rose, Ph.D., New York, declares in *The Journal* of the American Medical Association for April 6 in a report authorized by the Association's Council on Foods. In addition to providing a year-round supply of fresh foods, superior in nutrition and flavor, quick freezing produces a reduction in the number of bacteria which may range as high as 99 per cent.

Studies of the nutritive value of such foods, most of which have been aimed at their vitamin content, show that the factors associated with the method, rather than the freezing itself, are often the cause of nutritional losses. Thus some of the vitamin B_1 content of vegetables may be lost by blanching, or a loss of vitamin C may take place in the thawing process. Such precautions as reducing the blanching time to a minimum and cooking the preserved foods without preliminary thawing will avoid much of this loss.

Studies have shown little if any loss of vitamin A as a result of quick freezing. Vitamin B_1 is not affected by the freezing itself, although considerable loss may occur in the blanching of vegetables, such as lima beans and broccoli, which have a tendency to lose this vitamin in cooking. Little if any loss of vitamin G has been observed in the quick-frozen vegetables investigated, for example, peas, lima beans, asparagus and spinach.

The vitamin C value of quick-frozen vegetables depends on many factors, such as variability in the fresh material, due to botanic variety, soil, climate, age and sometimes seed size; conditions between harvesting and freezing, including time in transportation, manner of packing for shipment and temperature during shipment and while held in the market prior to processing; and blanching, cooling and holding before freezing.

As compared with other methods of preserving foods, quick freezing has been found superior in many instances. Thus vitamin C may be lost in citrus fruits subjected to heating and aging; whereas in quick-frozen fruits stored for many months, its content remains the same. Likewise canning has proved much more destructive of vitamin G than freezing in the case of asparagus, lima beans and spinach.

"The chain of steps leading from the producer to the consumer has presented many problems besides actual freezing," Dr. Rose points out. "Different varieties of the same food have manifested very different freezing qualities, and even the same variety produced under different soil or climatic conditions may vary widely in suitability for quick freezing.

"Extremely low temperatures are necessary. The usual temperature range for rapid freezing is from 0 F. to —40 F. In the case of foods frozen slowly, the ice crystals may be many times the size of the individual cells, piercing and tearing the delicate cell walls. On defrosting, this causes excessive leakage, which results in change of texture and loss of flavor. The task of freezing animal products is simpler than that of fruits and vegetables because the animal cells are more elastic and less readily disrupted than the plant cells."

Commenting on the length of time required for rapid freezing, Dr. Rose says that by one method, which employs a temperature of 8.6 F., two inch packages of products are frozen in ninety minutes. "Unpacked fish fillets and steaks can be frozen in from five to ten minutes," she adds.

"Frozen products often must remain in perfect condition at temperatures of from —5 F. to —10 F. for at least nine months or a year. Refrigeration must be maintained during transportation. For retail marketing, display cabinets which will hold the foods at temperatures of from 0 F. to —10 F. are required.

"All investigations indicate the great importance of sanitary care of foods before freezing, holding at sufficiently low temperature during storage, and cooking promptly after thawing or without thawing at all."

PHOTOGRAPHER in BED (Continued from page 403)

on a separate page and are enumerated.

Since you're shooting from bed and can't always get close to your subject, many of your prints will be improved by cropping. This is almost the greatest fun of all, and great training for your sense of composition.

From the cardboard out of a laundered shirt, cut yourself two pieces shaped like a capital L. Each leg of the L should be a little longer than the length of your prints. With the L's or squares, you will frame your prints, moving them in and out, up and down, until you have just the material and emphasis you want. Then mark with a sharp pencil and cut on the line with scissors, but not cuticle scissors. Don't be discouraged if you must cut away most of your print to get at the picture. Now with half a dozen of these cropped prints you will compose the best page of your album. Let your originality do its stuff.

By this time of course you want a faster lens. You hate to wait for sunny days, and you'd like to take pictures at night. All right, I won't argue with you while you're sick.

In fact, if you've come this far, you will want a camera of your own and probably you will want a 35 mm. with an *f* 2 lens. I hope not, but I'm afraid you will. The worst and hardest camera for the beginner is the 35 mm. I think you should have something else, a larger negative and perhaps ground glass focussing. But you'll get the miniature anyway. So did I. I studied the bargain lists and finally bought one, used, for two-thirds the original price.

Another thing you can do is get a Photoflood bulb and screw it into your reading light socket. It will cost about 35 cents and will enable you to shoot anything within range, day or night, rain or shine without the superfast lens. Referring to the shoe box, you will find you can get a clamp-on reflector for $1.50. You will clamp this on the head of your bed, and you're all set.

Assume that a couple of visitors sit on the foot of your bed. The Photoflood will light them brilliantly, but it won't reach the opposite walls. So your subjects will stand out dramatically against a velvet black background.

With the help of the Photoflood you can try a portrait. A pretty girl came through our ward, taking orders for Christmas cards for a worthy charity. She moved from bed to bed down the long row. As she came nearer I got all set. I took my meter reading and set the camera for stop and time. I focussed on the spot where I thought she would stop to speak to me. I had nearly enough daylight, but I wanted an extra emphasis, so when she reached the predetermined spot I turned on the Photoflood and shot. In the negative I got the foot of my bed, heads of other patients out of focus, and the line of the high ceiling. Due to my low camera angle, there was nothing I could do about the line of the ceiling, but when the negative was cropped and enlarged I had a picture that I liked.

Keep shooting. Don't fret about mistakes, because they will correct themselves. No matter how much the nurses kick, hang on to your shoe box. Your friends will bring you magazines and books on photography. Keep everything, because when you get up there's no telling what special equipment you may be interested in. But there are always the four musts: tripod, filters, lens shade and exposure meter.

If you've come this far, you must never marry. It wouldn't be fair to the wife.

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QUESTIONS AND *Answers*

Eating Baked Potato Skins

To the Editor:—Is it harmful for a perfectly healthy 3 year old child to eat the skins of baked potatoes? I have been told their continued consumption might bring on colitis. My child does not eat more than the skin of one potato every other day.

C. L., Michigan.

Answer.—If the child is perfectly healthy, the skins of baked potatoes are not likely to be harmful, if not taken in excessive amounts. There is no more reason why the skins of baked potatoes should produce colitis than there would be in the case of certain other coarse foods. If the skin of a small baked potato is eaten by a normal child not oftener than every other day, it should not be injurious.

Muscle Bound

To the Editor:—When a man discontinues exercising, why do his muscles become flabby? Is there such a thing as muscle bound? If so, what does muscle bound mean?

J. K., New York.

Answer.—Nature intended that all the approximately 500 different muscles of the human body should be used and exercised adequately in order that there should be the best degree of vitality and health and the greatest individual efficiency. The physiologists long ago had an axiom to the effect that "function makes structure." Exercise, therefore, changes the structure of muscular tissue. When a muscle contracts, energy is expended, and some of the cells are broken down by combustion. The muscle cells proceed to absorb from the surrounding blood plasma additional food materials, such as carbohydrates and oxygen. Thus, muscular activity results in a constant change of some of the elements of the muscle cell itself, which is kept in a state of increased efficiency in proportion to its reasonable use. The fibrous portions of muscle become hardened and tough, and both the size and number of muscle cells are increased by exercise. The circulation of the nutritive blood within the muscle is greatly hastened by exercise, and hence a favorable condition is brought about. It may be understood, therefore, how the lack of exercise causes the muscles to become "flabby" and to lose tone. When function is not demanded, structural changes actually occur, and more or less wasting results.

The term muscle bound is popularly applied to an abnormal muscular development which may restrict quick and supple movements, especially of the arms and shoulders. When a muscle is used a great deal, it tends to become shorter and hence to produce a strong pull on weaker sets of opposing muscles, causing in certain cases some deformity. For example, the large muscles on the front of the chest (the pectorals), may be so overdeveloped as to pull so strongly against the weaker muscles of the upper back that a "round shouldered" condition is developed. The expansion of the chest walls may be actually hindered by overdevelopment of this kind. The term muscle bound is descriptive but not scientific. Gymnasts and laborers who have chest muscles which are excessively developed are not usually good long distance

Stephen Deutch

Muscular activity results in a constant change of some of the elements of the muscle cells, and both the number and size of muscle cells are increased by exercise.

runners. A good chest expansion is necessary for success in cross country running, and most men who excel in this sport usually have rather thinly muscled chests. Muscular overdevelopment (muscle bound) may be a handicap for certain exercises of speed and grace, and excessively bulky muscles are not necessary in ordinary everyday modern life.

Flat Feet in Children

To the Editor:—My daughter, just 6 years old, has rather flat feet. Do you think that shoes with built-in arches, or steel shanks, would be likely to help this condition? Would going barefooted be likely to make her more flat-footed? Would you recommend a course of exercises to strengthen her arches? How long do they usually have to be taken by a child of her age?

C. R., Massachusetts.

Answer.—Pronated feet (flat feet) in a girl 6 years of age reflect a developmental trend which may in some instances be hereditary or reflect an inadequacy in tone of the muscles and ligamentous structures. This may due either to lack of development, malnutrition or to overweight or underweight.

The ultimate outcome and correction of such feet will depend on the increased tone of the supporting structures, whether muscular or ligamentous, and the maintenance of the normal shape of the bones forming the longitudinal arches of the feet. A foot that is pronated over a long period of time shows an adaptation of the bones to the deformed position, rendering it almost impossible to overcome this handicap. The patient should be fitted with shoes of adequate length, preferably with rigid shanks and soft felt pads to give form to the longitudinal arches. Such shoes and pads in themselves are not corrective but are palliative; that is, they relieve may of the symptoms and serve a useful purpose in maintaining proper alinement of the structures of the feet while growth is continuing. The basic correction will depend entirely on the increase of the ligamentous and muscular tone supporting the skeleton of this area.

Of the exercises, probably the calf stretching exercise is the most advantageous. In this exercise, the

Young Loveliness

The ideal time for a woman to begin an intelligent beauty regimen is while she is young—before the pristine loveliness of her youth develops into the mature beauty of womanhood.

A young lady should use cosmetics sparingly and with discrimination. The natural flush of youth seldom needs Rouge. A natural-looking Lipstick—perhaps. Powder—certainly Cleansing Cream—by all means. If her skin is inclined to be dry, a good lubricating Massage Cream helps to keep it looking smooth and feeling soft. For special occasions, a light Perfume or Cologne.

The loveliness of youth cannot be improved upon. It is a priceless possession. As such, it should be accorded intelligent cosmetic care.

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child stands with both feet in a slightly pigeon-toed position, the inner borders of the soles are elevated and the weight is carried entirely on the outer side of the soles. With the knees held straight and the heels not permitted to leave the floor, the child leans forward. When this exercise is properly done, a stretching sensation is experienced behind the knees. Other exercises, such as picking up objects from the floor and writing with a pencil grasped between the first and second toes, are useful.

There is a great difference of opinion in the effect of running barefoot on such feet. In this condition, the deformity might be increased because of the lack of support found in shoes. On the other hand, running barefoot, especially over rough grounds or climbing, is one of the best means of developing the tone of the muscles as well as the ligaments and bones of the feet themselves. The general rule is to permit the child to run barefoot when not playing on hard, flat surfaces.

The use of metal arch supports or other supports of unyielding character results in a further disintegration of the ligaments of the foot, and their use is rarely indicated except in very extreme instances or in association with other pathologic conditions.

Shoes should be of adequate length, with plenty of toe room. A high top shoe or oxford is optional. The necessity for socks or stockings of adequate length must be kept in mind.

Allergy and the Heating System

To the Editor:—Our 8 year old daughter is allergic to dust. We are starting to build a new home, and the question of suitable heating for her condition has arisen. I would like to know whether hot air and air conditioning would be advisable.

M. M., New Jersey.

Answer.—A hot air heating system with air conditioning is probably advisable. Such a system will include filtration of air as well as humidification so that dust and pollen in the circulating air of the home will be reduced to a minimum. Dry filters or viscous coated spun glass filters are usually installed in such systems and when properly cared for are highly efficient for arresting dust and for providing low resistance to circulating air.

Adequate humidification of air is readily achieved in a hot air system so that irritation of air passages, which follows breathing excessively dry air, is avoided.

However, a hot air heating system which does not provide at least for air filtration would be less satisfactory for a dust sensitive person than hot water or steam heat because of dust carried through the registers.

Even with air conditioning, it must be remembered that the usual precautions for dust avoidance should be observed, especially in the sleeping room.

Balance

To the Editor:—While visiting the Medicine and Public Health Building at the World's Fair, I saw a huge model of the human ear containing three semicircular canals in which a dark fluid was in motion all the time, according to the movement of the model. How does this control the sense of balance of a person when standing or walking?

E. E., New York.

Answer.—Each of the three semicircular canals, which occupy positions in the skull in three different planes, the horizontal, vertical and frontal, contains in its larger end a delicate sense organ known as the crista ampullaris. Each end organ responds to the pressure of the slightest movement of the liquid within its canal, resulting from movements of the head; it then sends out nerve impulses over a highly complicated network to the brain.

Each end organ is connected by delicate nerve tracts with various nerve centers in the brain. These lead to the muscles of the eyes, the cerebellum and elsewhere in the brain and spinal cord. From these different centers and along the nerve tracts reflex nerve impulses are conveyed to different muscle groups and joints, automatically causing the body to maintain its balance or to correct disturbances of equilibrium without the individual being conscious of what is taking place.

Some of the nerve tracts are already well known to investigators; others have not been traced. The mechanism controlling equilibrium is extremely complex and delicate.

Salt Water and Thirst

To the Editor:—Why can't human beings exist on salt water to quench their thirst?

E. S., Pennsylvania.

Answer.—Whenever the quantity of water in the body is decreased by the usual secretions and excretions, less saliva is secreted. This results in dryness of the mouth and throat, which causes the sensation of thirst. While we drink to relieve this feeling of thirst, the real purpose is to increase the amount of fluid in the body. The body fluids contain about 1 per cent salt. Sea water contains about 3 times as much salt of various kinds. When a fluid with a high salt content such as sea water is taken into the mouth, it extracts water from the tissues and the blood stream. This is known as osmosis. The dryness in the linings of the mouth and throat and the sensation of thirst are therefore increased. For these reasons, drinking water which has more salt than that found in the blood cannot maintain the volume of the body fluids or quench thirst.

Unclosed Fontanels in Adults

To the Editor:—What is the significance of an unclosed fontanel in an adult?

H. B., Oklahoma.

Answer.—While the meaning of an unclosed fontanel in an adult is somewhat obscure, some light is shed on it by consideration of the early development of cranial bones and fontanels and their normal evolution.

The primitive cranium of the embryo is at first entirely membranous. During its development, bone is laid down in radiating fashion from certain centers of ossification, each representing a nucleus in future individual cranial bones. Ossification gradually progresses, extending from the centers toward the margins of the bones, the circles of bone becoming larger and larger and gradually approaching those next them. The change from membrane to bone is not yet complete at birth; hence each bone is, at that time, surrounded by membrane. The angles of the bones are the last portions formed, and

in these regions are the fontanels. Thus, in theory, a fontanel may be formed at any point on the surface of the skull equidistant from three or more centers of ossification. Actually, there are about twenty-six such points on the cranium, and fontanels have been found, either regularly or occasionally, in most of them. Six fontanels occur as a rule in the human: the frontal (anterior) fontanel; the occipital (posterior); two sphenoidals (one on each side), and two mastoids (also paired). Of these, only the frontal and occipital are obvious in the normal infant.

Obliteration of the fontanels takes place by ingrowth of bone from their margins. This occurs at different times for the different fontanels, and there is wide variation in the normal time of closure from individual to individual. Most authorities state that the frontal fontanel, the last to close, disappears by the twelfth to the eighteenth month after birth. It is likely that closure in completely normal children may be much earlier, but in any event obliteration should be complete by the end of the second year. Medical literature contains records of persistence of the frontal or "great" fontanel in persons of 26, 30 and in one instance of 51 years.

Located near the great fontanel is another that is present as a fairly frequent variation in children, and traces of which may persist into later life. It is the so-called metopic fontanel. Remnants of it are found in the center of the forehead just above the level of the eyebrows. This region was, in the fetus, the lowest portion of the front or descending arm of the great fontanel. It has been found persisting into early infancy in as many as fifteen out of a hundred skulls examined. In most such cases, the connection between the metopic and the great fontanel has been closed off by bone, though occasionally the entire arm has remained open. Traces of this metopic fontanel and of its connecting arm have been found in skulls of persons of advanced age, usually only as small holes or fissures. These fissures are especially common in, though by no means limited to, certain mongolian racial groups. A further characteristic of such skulls is a tendency to an increase in the width of the forehead, especially in the region between the eye sockets. There is no relationship between the metopic fissures and the size of the cranial cavity. In other words, their persistence does not indicate previous increased pressure within the skull.

Attempts have been made to explain these variations either as a reversion to conditions existing in our primitive ancestors or the reverse, as a progressive tendency. They probably represent neither but are a persistence of a normal fetal or infantile characteristic of local developmental significance only. That is, there is a retardation of development confined to the particular part of the particular bone involved.

Effect of Eyeglasses on Shape of Nose

To the Editor:—Does the wearing of glasses cause a person's nose to become misshapen, especially in the teen age? Certain persons who have worn glasses since the age of 13 have terribly misshapen noses, which date back to the wearing of the glasses.

P. S., New Jersey.

Answer.—There has never been any scientific evidence to show that the wearing of glasses early in life has any tendency to alter the shape of the nose. While it is true that the nasal bones are not completely ossified [hardened] until puberty, it is also true that well fitting glasses do not exert sufficient pressure to interfere with their growth. The instances related of "terribly misshapen noses which date back to the wearing of glasses" are unquestionably either the result of forgotten minor injuries in early childhood during the development of the nose or else due to natural hereditary tendencies of a familial type.

It is advisable in any case, however, for a child who has to wear glasses that the frame be not of the "saddle type" which rests directly on the root of the nose but rather of the "broad-pad type" which rests on either side of the bridge.

If you have a question relating to health, write to "Questions and Answers," HYGEIA, enclosing a three-cent stamp. Questions are submitted to recognized authorities in the several branches of medicine. Diagnoses in individual cases are not attempted nor is treatment prescribed. Anonymous letters are ignored.

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California "Renovates" the Dust-Bowler (Continued from page 423)

"Well, gee whizz! You a nurse and don't know? Oh, well, you hospital nurses don't know lots of the good old remedies. You see, you get a black hen—not a white feather on her—chop her in the middle, then tie the squashy part right against the bottom of each foot, and it'll draw the p'ison right out of the sick woman. I've seen it work time and time again."

The doctor was called to see Mrs. Simpson, and much to Jenny Martin's disgust his diagnosis was not childbed fever. Mastitis, he had called the condition, but Jenny confided in Judy later and claimed he was wrong. She knew plain old "weed in the breast" when she saw it.

As Judy started back from the sick woman's tent she was hailed by another camper, "Come in and take a peep at my baby. She sure got the misery. All I done all day is warsh out didies. She took sick yesterday so Jenny Martin give her some macaroni and cheese—'lowed as how it would bind her up, but she's worser since."

"That woman" gasped Judy. "Why will you campers let her take care of your illnesses? Don't you realize I'm paid to do that? It's a wonder your baby is living. It's just 'patent medicine' she gives out so promiscuously—for anything from dandruff to gallstones. Give your baby nothing until I've talked to the doctor." Judy brushed the flies from the sticky face of the sick child. "Send some one to the clinic, and I'll let you have some netting for her crib."

Heat waves had already dimmed the distant mountains. Judy half envied the occupants of the tents as they lay stretched across their beds reading magazines. She noticed a car turned on its side and a group of men tinkering with the underneath parts. The little irrigation ditch offered some coolness to the bare feet of children. A guard in khaki and a sombrero strolled through the grounds on his routine rounds. Judy knew that from now until the sun was down in the West only the greatest emergency could create a stir in the camp. What luck would she have today? Each week on the state doctor's day she had taken numerous trips in her car to bring in patients who refused to face the hot sun.

Tomorrow she would have a chance to leave the grounds for a few hours. She rather enjoyed those trips to the roadside camps. Soon the county would shut down on such insanitary living that was characteristic of these mushroom camps. Still she had to admire the trait of character that kept them there. "I ain't a pauper yet," had boasted Mr. White. "All I got is $2, but the crops look good, and I'm aimin' to soak a little away this summer. I ain't had to ask Uncle Sam fer anything yet." Then he had looked with pride at his possessions. A weather-beaten tent, two beds—one inside the tent and one outside. A rusty cook-stove, a large wooden box for a table and chunks of wood for chairs—those were his possessions.

"You're crazy!" a woman hollered at him from the next tent. "We're goin' in tomorrow. Effen them women at the gov'ment camp warsh on 'lectric warshers and go to dances on Sat'day night, why can't I? Cotton pickin's jist a Nigger's work anyhow."

A "Nigger's work!" And Judy had recalled how just a few days before, she had picked up an old colored woman who had walked six miles to a cotton field, only to find there was "no pickin'" that day. Had she been sorry for herself? Not at all. As she wriggled from Judy's car seat, she pointed proudly at her two-roomed adobe, at chickens and an old red cow seeking shade beneath the tamarisks, "I bought my home pickin' cotton and peas. Took me a good many yea's, but now they's all paid fo'."

Judy glanced at her watch. Heavens! She had no time to daydream. The doctor was due right now. She hurried back to the clinic and set up the table for immunizations. Thank goodness! A few were already waiting for their shots.

Mrs. Green entered first with her brood. In his characteristic way, Dr. Hayes gave a quick glance over the crowd. "How long have you had those skin splotches?"

"Oh, that's just sunburn. Me and my girl Mamie here sunburn terrible. Do ever' summer."

The doctor turned to Judy, "You'd better follow this up. It looks like pellagra to me."

"'Taint polligry, Doc," she objected. "That's something 'at don't run in our family. You doctors is always tryin' to give me sompin'. The county doctor in Arizony 'lowed I had t.b., and he took two extra 'rays of me, but nothin' showed up. We're jist a scrawny bunch, that's all."

"Just the same, I think you'd better all come in next week when the State Motor Clinic comes and have some more pictures made."

"Sure, we'll come if you say so, but I'd like to know how come California is always pickin' on us migarnts. You'd think we was p'ison the way you punch holes in us and watch us up."

The doctor smiled, "There's nothing personal. We have two big reasons for all this. One is to keep the camps healthful, and the other is to keep down the spread of catching diseases throughout the state. Any one with half an eye who is driving along the highway can see the danger to California. Thousands of campers huddled together on the desert, along streams or anywhere they choose to stop, toss their garbage about to attract flies and use sagebrush or mesquite for toilets. Then from the nearby irrigation ditches, they dip their water for drinking and washing purposes. These shots are the only things that keep you from going to the hospital with typhoid. Remember that!"

The line of patients receiving treatment was broken into by an excited mother and child. "Please, doctor, 'fore you do anything else, jerk out my kid's tooth. She's been settin' us all crazy with toothache."

The little girl quickly calmed under the kindly treatment of the doctor. She opened her mouth and pointed with a trembling, grimy little finger to the tooth that hurt. "I don't want it pulled."

"And you shouldn't have it pulled. It's an important tooth. The nurse will put some medicine in today and then make an appointment with the dentist." Turning to Judy he asked, "Has the state dental trailer been here, yet?"

"No. I'm anxious to see it. I hear it's beautifully equipped. The influx of dust-bowlers has surely put the health departments on wheels."

The doctor left a little after 4. Judy counted the number of shots

given. Thirty had received their last doses, sixty their second and fifty their first. Some had left camp only half completed. Only a few had consented to the blood tests. Oh well, it's a slow process of education, she thought as she dried the needles and put them neatly away.

"Has the doctor gone?" called some one from the outer room. An instant later in dashed the camp flirt. "Oh, shoot, he has gone, hasn't he?"

"He just left. What's on your mind?"

"I wanted to ask him how to get rid of these pimples. My husband thought he could tell me."

"Your husband?"

"Sure. You didn't know I was married, did you? Been an old married woman a whole week, and gee, it's great."

"Why you're only 16," gasped Judy.

"So what. My mother was just my age when I was born. You know my Bill, don't you? Bill Sanders that plays the guitar at the dances."

"What else does he do? I mean, what's his line of work?"

"His line of work? Don't make me laugh. Who works these days? He may get in peaches at Marysville. He's no good stoopin', that's how come he's not workin' here. If we get our grant check, and I reckon we will now that we're a family, we'll go to Marysville and call it our honeymoon. Say, nurse, why don't you get married? You ain't bad lookin', and some day you'll get too old."

"I'm not giving it much thought. Besides if I did marry, I'd want my husband to have a good steady job."

"Not many guys like that left. You're too high-hat. There's a lot of swell guys here in camp. What if they don't work? You can go on relief like we did. Well, I must get back to my Bill."

Judy sighed with relief as the door closed behind the new bride. The long hot day was almost ended. She would hop in her car and drive into the country. The air would still be hot, but at least she would have quiet and a few hours away from responsibility. But before she found time to powder her nose, the door bell burst the momentarily quiet atmosphere.

"My sister's awful sick," explained a small child who had been sent for help. "She's got an awful belly-ache. Reckon she's dyin' 'cause she says she hurts like a rusty nail goin' in and out."

By the time Judy reached the tent a group of neighbors had already gathered to offer all kinds of advice to the frightened mother. A quick examination convinced Judy that the doctor's services were needed at once. While waiting, she asked, "Do you know what started this?"

"Well, it might be my fault," confessed the child's father. "You see, she ain't been having a good appetite, so today when I got my check I give her a dollar and told her to go down to the store and get anything she wanted. Well, I reckon she stuffed herself too much."

"Yes, I imagine that's it. You didn't help her appetite one bit and lost a perfectly good dollar."

In less than an hour the suffering child was on her way to the hospital for an appendectomy. A few neighbors still lingered to offer sympathy. "I wouldn't worry so," remarked one kind soul, "there's lots of folks 'at go to hospitals and don't come back dead."

Judy smiled tolerantly as she started to leave them, "That makes me think. Don't forget to come to baby clinic next Monday. Bring in all your little folks under 6."

"How come that doctor wants well babies? Ain't she got enough sick ones to keep her busy?"

"She wants to show you how to keep them well. And you know you like to have them weighed on her nice shiny scales."

At sunset Judy was in her car riding away from town. Strange country, she thought. Imperial Valley could be so cruel on summer days, but her mornings so rosy; and the red-orange clouds of evening were as curtains shutting out ugly pictures that some days brought forth. She saw men still working in vast acres of cantaloups. Others had just begun to cut alfalfa. They would work all night long to avoid the terrible heat. She had to take off her hat to the men who had converted this desert into an oasis and to those who worked to keep it so.

Finally she headed back toward town. No cooking in her little kitchen tonight, she decided. No, she would treat herself to a T-bone steak in some air-conditioned cafe. Today she had certainly earned it. She would imagine herself in a great hotel overlooking the ocean with the breeze blowing in across her hot cheeks so deliciously cool.

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BOOKS ON HEALTH

Your Baby—And How to Care for It

By Lindsey W. Batten, M.B. Cloth. Price, $1.50. Pp. 182. New York: Harper & Brothers, 1940.

The keynote of this small volume is simplicity in instructing the mother in how to care for her baby.

The author's description of weighing the baby will be more easily understood by his English audiences than by his American, as the newer type of scales in this country has done away with weights, the balance being directly on the arm of the scales.

The discussion on bottle feeding is adequate, but the ordinary mother will probably have trouble in choosing a formula for the baby; this after all should be left to the discretion of the doctor. The additions to the diet, such as extra cereals and vegetables, is undertaken a little earlier in this country than in Europe. The general tendency to can foods in this country has made the old-fashioned soup formulas obsolete. Also, the advice that it is not necessary to add vitamins in the form of orange juice and cod liver oil until after 2 months of age, is a little behind the time of starting babies with these accessory food substances in this country. The diets for the older baby are perfectly adequate, but the differences between the English and American dietary can only too plainly be noted. The publishers should note this in subsequent editions.

ARTHUR F. ABT, M.D.

How to Overcome Stammering

By Mabel Farrington Gifford. Cloth. Price, $2.25. Pp. 169. New York: Prentice-Hall, Inc., 1940.

This book is directed primarily to the speech sufferer. The subject matter is divided into two major parts, the first two chapters being devoted to specific speech exercises for the attainment of a "fluency pattern," and chapters III and IV to technics of self analysis and personality readjustment. The appendix, in two sections, contains supplementary practice material and exercises. There is, in addition, a reference list for further reading.

The author places entirely too much emphasis on the technical aspects of speech production, elaborating, for example, on the "sigh principle," the "application of the breathy tone," "conquering consonants," the "silent recall" and the "fluency pattern." Since stuttering is merely a peripheral manifestation of a more serious underlying maladjustment, focusing so much attention on the speech symptom is akin to centering treatment on the patient's high temperature in cases of pneumonia.

The author writes in an easy, interesting and readable style. However, the whole problem of the stutterer, his stuttering speech and his neurosis, is too complex for such oversimplified treatment. The book has some excellent material, but, scientifically speaking, the glibness with which it is presented gives the reader an impression of lightness and superficiality.

While not a scientific treatise, "How to Overcome Stammering" is in the "inspirational" category and should give the stutterer a measure of optimism and hope—which is in itself a commendable feature. Indeed, this general tone of "uplift" is perhaps the book's greatest merit.

JAMES SONNETT GREENE, M.D.

Your Child's Food

By Miriam E. Lowenberg. Cloth. Price, $2.50. Pp. 299. Illustrated. New York: McGraw Hill Book Company, Inc., 1939.

Written primarily to aid parents and nursery workers, this book may also be found useful to physicians and teachers. It answers specifically and well the questions which parents usually ask on their child's food.

The first chapter, entitled "Your Child Will Eat," is devoted to a "pep" talk for parents. The book ends with ninety pages of recipes. The greater portion of the text gives detailed, clear and interesting information concerning how and when new foods should be offered to the child, how to proceed in forming good food habits, what to strive for and expect in the way of food habits in the early years, when to expect children to use various implements of eating and the best kind to use, when to expect children to eat with the decorum of an adult, when and how to introduce children to the family dinner table. The proper preparation of foods is also discussed, and breakfast, sup-

"Writer?"

Courtesy The New Yorker

per and dinner menus for every day in the year are included.

It is possible that the scope of the book is too extended, since there is included a chapter on allergy by a pediatrician. However, all the material is sound, well written and easily understood.

WILLIAM I. FISHBEIN, M.D.

Abnormal Speech

By E. J. Boome, H. M. S. Baines and D. G. Harries. Cloth. Price, $2.50. Pp. 162. Cleveland: The Sherwood Press, 1939.

This small book, written in England by a physician and two speech therapists, attempts to cover the entire field of abnormal speech —a task which cannot be adequately accomplished in 162 pages, of which almost one third are devoted to an appendix, a glossary, a bibliography and an index. While much of the content is good, the book lacks sequence and, in spite of its brevity, is overloaded with immaterial data. One might say that it is not so much a scientific treatise as an interesting, rambling discussion of speech disorders in general.

The authors show a real understanding of the problem and are to be commended for their emphasis on taking into consideration the whole personality of the speech sufferer.

J. S. G.

Unto the Fourth Generation

By Irving Simons, M.D. Cloth. Price, $2.50. Pp. 243. New York: E. P. Dutton & Co., Inc., 1940.

Although it specifically disclaims the intention of giving the layman information which can be of use only to the physician, this book does exactly that. Chapters 3 and 4 of "Book Two" of the volume occupy fifty pages or 20 per cent of the length of the book. In large part they constitute information which can do nothing but disquiet the patient and tend to create that condition of syphilophobia against which the author warns. In addition, there is a section apparently of afterthoughts incorporated in "Book Three" under the title "Scientific Addenda," which is another forty pages of material partly controversial and largely of interest to physicians only. Much of the information is imparted in a confusing manner, as in the statement that "congenital syphilis is inherited," which supports the theory that infection of the unborn child takes place through the germ cells rather than through a previously or simultaneously infected mother, as is universally held.

Physicians will be in general agreement with the author's plea that treatment of the patient shall remain as much as possible a function of the private practitioner, who can and will give some degree of consideration to privacy and personal relationships. The title of the book, "Unto the Fourth Generation," is an unfortunate perpetuation of the confusion between moralistic considerations and public health aspects in the control of the venereal diseases, to say nothing of the scientific inaccuracy of an implication that syphilis is commonly, or gonorrhea ever, transmitted even to the third generation, to say nothing of the fourth. This is not a book which can be recommended for the lay reader.

W. W. BAUER, M.D.

Transition Years

By Joseph Rety, M.D. Cloth. Price, $1.75. Pp. 168. New York: Greenberg, Publisher, 1940.

Here is a chatty and detailed description of many of the complaints and disorders which women undergo at about the time of the menopause. The physician who wrote the book is particularly impressed with the importance of having women avoid a fear of the menopause and its attendant difficulty. He feels that if they understand the nature of the problem, the fact that it is a temporary readjustment and that it seldom leads to permanent disease, it will help them to weather this period of storm and stress more easily and with less discomfort for their friends and family.

ELMER L. SEVRINGHAUS, M.D.

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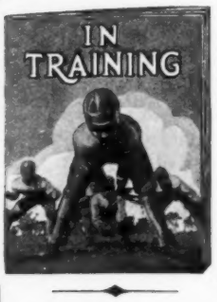

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MENTAL HYGIENE in the CLASSROOM

(Continued from page 419)

metic, in spelling and in other subjects. With sympathetic handling John gradually developed more wholesome attitudes toward himself.

An important procedure is to help children find socially approved and wholesome outlets for their energies and their emotions. Modern teachers interpret any peculiar behavior as an attempt on the part of the child to satisfy some pressing emotional need. The child who feels insecure is likely to search for security, whether the result be social or unsocial, wholesome or unwholesome. The teacher's problem is to help him find better solutions. For instance, clowning and a great deal of other annoying classroom behavior come from the child's desire for attention. A more wholesome solution of this problem is for the child to attain recognition by taking part in a play or by serving on some committee for the class. One teacher in a slum area noticed that a boy interrupted the class by playing on a harmonica. Instead of punishing him, she realized that he was satisfying some inner need, and her duty was to encourage a socially acceptable satisfaction of this need. Out of this incident grew the Harmonica Club, which favorably influenced the behavior and personalities of the entire class. In all kinds of schools, children are using up their energies by making collections of all sorts and preparing interesting scrapbooks.

In the attempt to help a maladjusted child, the modern teacher resorts to a variety of principles and procedures. She realizes that no one prescription or technic can be relied on. In the field of child conduct, as in medicine, there is no general remedy. Each child is unique; what helps George to adjust may have no effect on James. If one procedure does not succeed, the teacher keeps trying others.

Experience with teachers, with psychiatrists and with child guidance clinics has shown that it is difficult and expensive to correct personality disturbances which have already developed. Prevention is easier than cure; for this reason, educators and mental hygienists agree that the welfare of children will be served if schools work for prevention.

What are schools trying to prevent? Since they are helping their pupils make the best possible showing "at the front," they are trying to eliminate any environmental influences which will interfere with this showing. Some idea of how many individuals fail to "storm the front line trenches" successfully may be gleaned from the following three statements:

1. J. Edgar Hoover has repeatedly given figures to show that crime is so widespread that it costs every teacher, every parent and every child in the United States $120 a year. He claims that this country has an army of lawlessness of 4½ million persons and that a serious crime is being committed every 22 seconds.

2. Psychiatrists tell us that there is in the world today a tremendous amount of unhappiness, inefficiency and social ineffectiveness even among so-called normal people. It is well known that about half of the hospital beds in the United States are occupied by mentally sick individuals.

3. W. Carson Ryan, in his book, "Mental Health Through Education," says, "More of the boys and girls now in secondary schools will eventually find their way into hospitals for mental disease than into colleges."

The preventive program, as it is being worked out in the modern classrooms, often serves also as a corrective in certain milder cases of maladjustment. Mental hygiene and progressive education have suggested a large number of principles, which can be found in the literature. For example, Miss Ruth Hankins has prepared an excellent list of principles of teaching children of retarded intelligence.[2]

An important part of the preventive program is the early discovery of symptoms which may later cause trouble in school or in life. Among such symptoms are truancy, unsocialness and any extreme form of conduct. Many successful citizens were truants in their day; yet crimi-

(Continued on page 465)

2. Hankins, Ruth. "Principles of Teaching Exceptional Children in the Elementary Schools." Child Research Clinic, The Woods Schools, Langhorne, Pa. Pp. 17. Free.

MEDICINE IN THE NEWS

"A SERIES of dry lectures on sundry symptoms, you say? Not on your life. Although 'Medicine in the News' is a public service program, designed to impart information, it is written and produced as if it were a commercial program which had to sell its quota of breakfast food or some other commodity. Because radio executives now realize that you have to sell—make interesting—a public service program to the listener just as much as you have to sell a commercial product."

This was the comment made in a newspaper article by a National Broadcasting Company writer in describing Medicine in the News. This program is presented by NBC every Thursday afternoon at 3:30 Central standard time as a sustaining feature (noncommercial) under the auspices of the American Medical Association. The comment continued:

"Therefore, Medicine in the News keeps one-man exposition at a minimum and music and dramatization at a maximum. It selects serious medical subjects about which the layman should know, but through the devices of expert dramatic writing and production, music and brief, interestingly written talks by Dr. W. W. Bauer, it manages to make these subjects intensely human. Tuberculosis, heart disease, the perils of fireworks, the use of sulfanilamide, new nonsurgical methods of treatment of kidney stones—these are some of the subjects treated recently, and all of them were made interesting and understandable.

"The program, based on facts supplied by the American Medical Association, is written by William Murphy and directed by J. Clinton Stanley. Joseph Gallicchio conducts the orchestra. A veteran cast of radio actors is used in the dramatized portions."

Other evidence that the programs are being well received is the action by radio station WHK, a Blue network outlet at Cleveland; they are making electrical transcriptions of the program in order to broadcast it at a later hour when broadcasting of the network program is not convenient.

Indications that listeners enjoy the program are contained in the following letters:

"The Crusade of Louis Pasteur was the most educational and interesting program I have ever heard. If only we nurses could hear more programs like that one, we could better appreciate those men that sacrificed so much for humanity. Thank you again for your program, and I hope we can hear more in the near future."—*E. M. P.*, Homestead, Pa.

"I listen to all your broadcasts when I am at liberty to do so and find them thrilling, instructive, entertaining periods, and so great an uplift from the ordinary humdrum programs."—*C. A. D.*, Lynn, Mass.

"I listen to your radio broadcast Medicine in the News on Thursday of each week and thoroughly enjoy every one. They are very helpful to me and are doing a fine thing for the public."—*Mrs. R. R.*, Rosalia, Wash.

"Your programs are interesting and helpful, as well as entertaining. Please answer my question, can anything be done to correct a spastic voice? Thank you very much. Hoping to hear your answer."—*M. B.*, Norfolk, Va.

"May I add my note to what must be a long list of congratulatory messages regarding your recent syphilis broadcast? I had an opportunity to listen to the entire broadcast and think it is one of the best things of its kind I have ever heard, both as to script, directing and execution. I hope that we can have lots more of the same kind of high quality material."—*J. L. N.*, Nassau County Medical Society, Mineola, N. Y.

TUNE IN HERE

New England States

WNBC	New Britain, Conn.
WLBZ	Bangor, Me.
WEAN	Providence, R. I.

Middle Atlantic States

WABY	Albany, N. Y.
WBEN	Buffalo
WJTN	Jamestown, N. Y.
WJZ	New York City
WMFF	Plattsburg, N. Y.
WSAN	Allentown, Pa.
WLEU	Erie, Pa.
WKBO	Harrisburg, Pa.
WGAL	Lancaster, Pa.
WFIL	Philadelphia
KDKA	Pittsburgh
WORK	York, Pa.

East North Central States

WENR	Chicago
WGL	Fort Wayne, Ind.
WBOW	Terre Haute, Ind.
WBCM	Bay City, Mich.
WXYZ	Detroit
WFDF	Flint, Mich.
WIBM	Jackson, Mich.
WJIM	Lansing, Mich.
WSAI	Cincinnati
WING	Dayton, Ohio
WIBA	Madison, Wis.

West North Central States

KSO	Des Moines, Iowa
KMA	Shenandoah, Iowa
KSCJ	Sioux City, Iowa
WREN	Lawrence, Kan.
KANS	Wichita, Kan.
KYSM	Mankato, Minn.
WTCN	Minneapolis
KROC	Rochester, Minn.
KFAM	St. Cloud, Minn.
KWK	St. Louis
KSOO	Sioux Falls, S. D.

South Atlantic States

WCOA	Pensacola, Fla.
WAGA	Atlanta, Ga.
WSOC	Charlotte, N. C.
WTAR	Norfolk, Va.
WRTD	Richmond, Va.
WCKV	Charleston, W. Va.
WBLK	Clarksburg, W. Va.

East South Central States

WAVE	Louisville, Ky.
WAPO	Chattanooga, Tenn.
WROL	Knoxville, Tenn.

West South Central States

WJBO	Baton Rouge, La.
KTOK	Oklahoma City
KFDM	Beaumont, Texas
KTSM	El Paso, Texas
KGKO	Fort Worth, Texas
KXYZ	Houston, Texas
KRGV	Weslaco, Texas

Mountain States

KTAR	Phoenix, Ariz.
KVOA	Tucson, Ariz.
KVOD	Denver
KGHF	Pueblo, Colo.
KOB	Albuquerque, N. M.
KLO	Ogden, Utah
KUTA	Salt Lake City

Pacific States

KECA	Los Angeles
KFSD	San Diego, Calif.
KGO	San Francisco
KTMS	Santa Barbara, Calif.
KEX	Portland, Ore.
KJR	Seattle
KGA	Spokane

Canada

CFCF	Montreal

MOTHERS' HELPERS (Continued from page 409)

jurisdiction. Before any diet goes into effect the doctor must approve it. He recommends the amount and the kind of cod liver oil, which is taken by all Brightside children. In addition the doctor supervises the plant and its equipment, with regard to sanitary measures and the danger of accident. The health of the staff is his concern. Dismissal of an employee for reasons of health is within his province. He is on call for advice not only during clinic sessions but at all times. However, the superintendent of the day nursery has to see that his orders are carried out.

In the doctor's absence the graduate nurse has the responsibility for the children. During the day she has many minor ailments to look after, for children are sent to the clinic even for slight injuries. Occasionally a serious accident occurs. The nurse has to be level headed enough to give first aid and to know what to do next. Then, too, the parents and the children come to her for advice. After each weekend she inspects the whole group of day nursery children before they go to their classroom.

The social worker has another part of the program to carry. She visits in the neighborhood to report on social conditions. The doctor may ask for an investigation of the home circumstances of a certain child, or the nurse may make the request. The findings of the social worker help the doctor to understand the children he sees. The same holds true for the nurse and for the whole day nursery staff.

The superintendent of the day nursery coordinates the work of the health center and that of the day nursery. For practical purposes she controls both organizations. Thus it is within her power to spread the message of health, if she will. She has influence not only in the day nursery but also with the families. Parent education is always important in dealing with children.

At Brightside there are child study meetings in the evening. Usually the mothers predominate, the fathers staying at home with the children. To these mothers the health of their children is always an interesting topic. These meetings are also helpful to the staff who are constantly trying to teach health habits. The speakers come from different fields; one month it may be a nutritionist, another month a child psychologist. Last year one of the most popular talks was given by the clinic's woman doctor. The fact that she spoke of her own four children immediately won her audience of mothers. It is just such details that put the real lesson across. Obviously, the children profit indirectly.

So much for the present program. Step by step, it has grown from a modest beginning. By no means has it stopped growing. A psychiatric clinic is a possibility. One was opened at Brightside several years ago but was later closed. To be sure, any such work must be approached warily, because it can do as much harm as good. At present one pressing problem is to find a way of giving the mothers expert advice regarding their children's behavior at home. Perhaps a child psychologist could be of service. The majority of children in Brightside suffer from economic and emotional difficulties. In fact, the day nursery exists because of these abnormal conditions.

Brightside is not the only day nursery to emphasize health. Under its Association of Day Nurseries, Cleveland offers both medical and mental care to its children. The Troy Day Home, the oldest day nursery in this country, has had a large clinic for years, which is also open to the community. It is evident that there are many ways in which health can be stressed in such an institution.

Unfortunately, not every day nursery can have the elaborate setup that Brightside has as a result of its health center. Nevertheless, every day nursery should have minimum health standards. First, in communities where a pediatrician is available, every day nursery should have one associated with its staff. If none is available, a doctor who has had experience with children should be employed. This doctor should be in charge of the medical program and supervise the physical care of the day nursery children. He should be in the day nursery at stipulated times. Probably the best plan would be to have regular sessions to cover periodic examinations as well as those for admission and readmission.

A clinic as a part of a day nursery has many advantages. At the least, a room should be set aside where the children can be examined. It should be properly equipped and used only for medical and related purposes. This is a much better arrangement than having the health work done outside, because the medical program should be closely tied up with the physical care of the child in the day nursery.

Since the day nursery has so grave a responsibility, a graduate nurse should always be on the staff. Today many day nurseries have a graduate nurse as acting superintendent. But she does not have sufficient time for her administrative duties unless she has another graduate nurse under her, except in the case of a small nursery. A graduate nurse is preferable to a medical social worker who has not had a nurse's full training. A social worker is helpful but not absolutely necessary for the medical program. Certainly, however, there should be some one to visit and investigate the homes and the community resources.

Dental work for young children is a vital need. In small places it may be possible to make an arrangement with an outside dentist or clinic. But in the large city it is better for the day nursery to have a dental clinic in its own building. There are two reasons for this: the transportation problem and the crowded conditions of most public clinics. The day nursery child should not have his routine upset any more than is necessary. Dental work is a long and extensive process, and the young child needs gentle handling.

Since special eye, ear, nose and throat examinations are necessary only once a year, it may be more practical to arrange for them to be done outside the day nursery. It is better to risk taking children to a hospital than to omit such care entirely. Day nursery children need the best because of their unfortunate circumstances.

Mental hygiene, too, can be particularly helpful to these children because of their unhappy, often tragic, backgrounds. But mental care must have as a basis a sound health program.

According to the Welfare Council in New York City there are over

100 day nurseries there. At present no figures are available from the National Association of Day Nurseries for the whole country. But estimating from previous statistics, one sixth of all day nurseries in the United States are in New York City. It is evident that the day nursery is responsible for the welfare of a great many children whose heritage is deprivation and strife. Is not the health of these children of paramount importance?

Brightside is only one example of an adequate health program for the day nursery. It is hoped that this analysis will encourage other day nurseries along the same lines. Admittedly, such a program as that of Brightside is costly. But if these children are neglected by society now, it is inevitable that a high percentage will later need to be cared for in hospitals, jails, courts and reform schools. Such a course will only postpone the payment which society will eventually have to make. By meeting its responsibilities today, the day nursery, acting as a preventive agency, may keep these children from becoming a burden and expense to the community tomorrow.

DO YOU KNOW POISON IVY?

(Continued from page 434)

to those used in treating other burns. The chemical involved in ivy poisoning is similar in many ways to carbolic acid, but the principal difference between a burn caused by carbolic acid and one resulting from poison ivy oil is that in the latter case a long latent period ensues between the time of contact and the appearance of the rash. When toxicodendrol is applied to the skin, it causes an inflammation which does not appear until eight, twelve or twenty-four hours have elapsed. The mere fact that the latent period in the one case is short and in the other case long does not modify in any way the choice of remedies.

In addition to the moist compresses, there are hundreds of suggested remedies that range all the way from gunpowder in milk to the most complicated prescriptions. As a rule, they are of little value.

Spreading the poison is largely a matter of longer incubation period where the skin is thicker, or where there was a later contact with ivy dust on fingers, clothing or objects. It also may come from penetration

A

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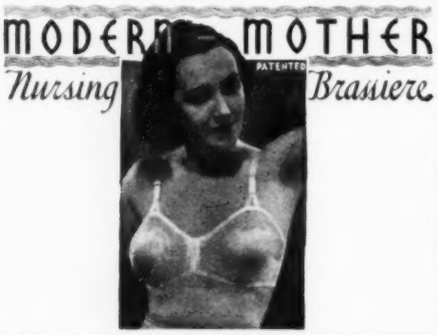

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of the poison from contiguous tissues. There seems to be, however, general agreement that the thin watery discharge from the blisters is not dangerous.

Too many people count on immunity. One young botanist at the University of Wisconsin had counted on it successfully for all her twenty-five years, but one day too many she collected plants through an ivy-infested woods she had visited many times before. The day was warm and sticky; the damp ravine was full of hungry mosquitoes. Tired and hot and irritated, she childishly refused to be careful and mopped her face with the same sleeve that had brushed through poison ivy thickets; dropped to rest too close to a patch of poison ivy; rubbed her coarse overalls up and down mosquito-bitten legs to relieve the itching. Foolish girl! Once it was too much trouble to take the precautions "just in case—" because she was "immune to poison ivy." Now the precautions are vital because her work in ivy-infested woods must be continued.

Natural immunity to ivy poisoning is an uncertain quantity. It has no proof, no measurement. The apparent fluctuation depends on the thickness of the skin exposed, on general health conditions, on the efficacy with which the body naturally combats phenolic poisons and on skin gland secretions. A hot, perspiring skin, especially one broken here and there by insect bites or bramble scratches, seems particularly susceptible to the poisonous principle.

Natural immunity does not seem to be inheritable. It has no racial and no geographic limitations; nor is there proof that brunettes are more favored than blondes, women than men, old than young, fat than thin.

Acquired immunity is another problem of equal preplexity. For years physicians have administered the toxic agent, either in alcohol or oily solution, by mouth or by intramuscular injection, in an effort to produce immunity to ivy poisoning.

The results have been comforting, but no more than that. Occasionally the immunity was rapidly induced, sometimes temporarily, sometimes permanently to all appearances. Often it was fleeting and had to be renewed periodically or maintained by regular dosage all through the summer and fall.

Out of the welter of conflicting reports comes the understanding that acquired, as well as natural immunity is a thing of great individual variation. Welcome it if your doctor can induce it successfully, but do not flout the idea if the injections do not protect you, because the very same process may be of great help to others.

In evaluating the whole confused problem of inducing immunity to poison ivy, dermatologists can only suggest that "preseasonal desensitization may be effective in rendering a person immune to the poisoning for a greater or less length of time, or it may have no effect. Desensitization after the inflammatory reaction has set in seems to be of even less value."

It is indeed a gloomy picture that includes no certain preventive measures, no certain treatments, no certain immunity, either natural or induced. But the picture has one bright spot that only you yourself can put in, and on that one thing depends all the times from now on that you will hike through Fisher's woods and return without fear of waking next day with poison ivy.

Learn to suspect every fence corner and woods and thicket of harboring poison ivy in some form or other. Know the three leaflets for their shape and light green color, and then avoid them. Learn to keep a winter eye out for the bare stalks topped with yellowish white berries. Stay away from brush fires lest you inhale poison-bearing ash particles.

If outdoor work in the vicinity of poison ivy is absolutely necessary, dress for protection. Wear boots into which overalls or slacks can be tucked, roll down shirt sleeves, fasten collars, wear gloves; but do not nullify all those precautions by wiping your sweaty face with the sleeve or glove. What good is caution outdoors, if the clothing is carelessly removed and hands are allowed to go unwashed?

If you stop to think about the days when your arms were hot and swollen and covered with blisters, no precaution seems too much trouble "just in case."

Amuse yourself by reciting as you stride down the woodland path,

> "Leaves three,
> Turn and flee;
> Berries white,
> Take flight,"

because the old rhyme still tells you the best preventive.

"Out of the Mouths of Babes"

***It is surprising what numbers of children have speech impediments that need expert correction. Early training and treatment are essential, says* MARY PARTRIDGE BECKER**

PETER GATES is a bright lad of 8, but his teacher has noticed that, to him, a pencil is a "penthil," and his classmates are "boyth and girlth."

The lisp should be corrected, his teacher knows, but nobody in the school system has either the time or the specialized training necessary to eliminate the defect, which may be the root of a serious personality problem for Peter.

Twenty-seven Wisconsin cities have filled the gap between the school system and Peter Gates by the employment of a speech correctionist, a personable young woman specially trained to help school children to audible, coherent and pleasant speech.

A staff of forty-five is employed in the state; New York City has sixty and Detroit forty; but no state program is as widely distributed as that of Wisconsin.

Five days a week during the school year you can see the correctionist at work, diagnosing lisps, stutterers and the case of the child who "won't talk at all"; she refers cases to surgeons or dentists, slowly, tediously drills toward better speech and ferrets out possible environmental and hereditary factors in the defects.

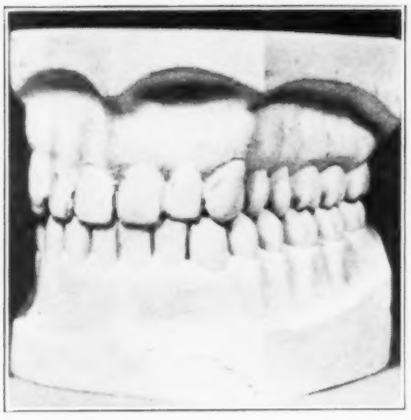
When especially puzzling problems in diagnosis or treatment arise, she recommends that the child's parents drive him to Madison, where the professor of speech pathology at the University of Wisconsin holds a clinic in which 150 cases are diagnosed per year and 150 more received for treatment.

Soon after school is opened, assuming the work is being done for the first time, the speech teacher listens carefully to the speech of every child. When her cases are discovered, she arranges for speech correction classes. The average worker handles five schools, visits each one twice a week; she takes her pupils in groups of from one to six and for periods of from fifteen minutes to one hour.

Just as any other child, the speech defective learns his speech by imitation. Secluded in day schools for the deaf or in special classes for the speech defective alone, he has heard only defective speech, except for that of his teachers.

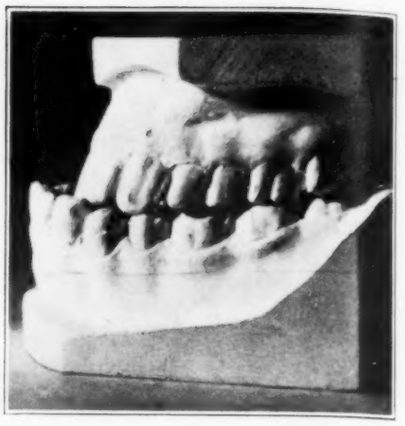
That the need for speech correction is great is indicated by the startling statement of the Committee on the Child Defective in Speech at the White House Conference of 1930: "There are 1,000,000 school children in America so defective in speech as to require remedial treatment."

This figure includes only children in public and parochial schools; it does not count children so defective in other ways that they can't be sent to school, nor those beyond the ages covered by a program of compulsory education, those too young for schools or children capa-



Correct speech is greatly aided when the child has perfect occlusion between his upper and lower teeth, as in this dental cast.

It is difficult for the child to learn correct speech when his upper jaw protrudes too far over the lower jaw, as in this dental cast.



This dental cast is that of a mouth in which the lower jaw protrudes, instead of the upper jaw, also making speech difficult.

ble of attaining normal speech by their own efforts or through help from parents and classroom teachers. Were these included, the figure would soar wildly!

The possible reasons why a child's speech is defective range all the way from a general lack of intelligence to an error on the part of parents or teachers in forcing the child to write with his right hand when he was intended to write with his left. Factors necessary for good speech include motor skill, good hearing throughout the range of speech sounds and the essentials of structure—a normal mouth, nose, throat, ear and larynx [voice box].

Stuttering is a disturbance in the rhythms of speech, an intermittent blocking, from which, if the conversational situation is favorable, the child may at times be free. The sudden change resulting from forcing a child to use his right hand when he is by nature left-handed may bring to life a long-dormant case of stuttering.

Alfred, a boy of 16, entered the University of Wisconsin with a pronounced stutter. He had a doting mother and at home had been protected from hard knocks; but at the university his environment was changed, his protection was gone, and his stutter became noticeably worse.

But a professor took an interest in the boy because he had such a keen eye for microscopic research work; Alfred gained confidence and self esteem and immediately began to get over his speech defect.

A fairly common but exceedingly stubborn type of speech defect is that found in the hard of hearing child, who may show lack of inflection and control as to pitch and volume or inaccuracy of consonant sounds. In one case of this kind, exceptional results were obtained through speech correction, in spite of the fact that the patient was 16, a late age to begin, when she undertook treatment at the University of Wisconsin speech clinic.

It was practically impossible to understand this patient's speech. Deaf until the age of 8, she had never learned to pronounce her consonants. On gaining her hearing, she could hear sounds but couldn't make them herself. But by having her tongue placed for her and practicing the correct positions in a mirror, she had such success that today few persons would even be conscious of the defect.

The child with poor occlusion of the teeth—either a forward lower jaw or an upper jaw too far forward—is hampered in the production of such words as *s*ay, *z*ebra and, if the lips cannot be brought together readily, in words like *p*ony, *b*ite and *m*an. The serious personality scars that are almost inevitable in cases of this kind make orthodontia [correction] imperative.

Children who are "tone deaf," and consequently unable to tell whether they are speaking high or low, are being greatly helped to produce the proper tones by an instrument known as a tonoscope. A rod, pressed against the patient's throat, carries the sound vibrations to a diaphragm which changes the sound frequencies into light for a neon lamp; the lamp is made to shine on a round disk filled with concentric rows of holes, mounted on a phonograph turntable. One of those rows will appear as a solid circle under the neon light. That row, which has been "synchronized" with the light, in turn indicates the frequency [pitch] of the tone which has been produced by the patient's voice.

Progress in many cases of really serious speech defects has been miraculous; but there are many more, some apparently simple, which resist the most stubborn treatment. The field is new and in many respects unexplored; but one point may be accepted as axiomatic: *Early correction is all important.*

The average child is eager to speak. Given the essentials of general intelligence, motor skill, good hearing throughout the range of speech sounds and the essentials of structure, he will begin to speak long before he can walk.

Peter Gates lacked only one of these essentials—a well formed mouth. He muddled through somehow and learned to speak, because he was eager. But his lisp was pronounced.

A few years later Peter received speech correction work; through careful dentistry his mouth form improved. But the lisp remained, and tedious hours of practice lay ahead of Peter and his speech teacher before he gained normal diction, simply because he had learned incorrect speech habits. Today, Peter's mother and father are telling their friends, "Yes, sir! It's certainly important to correct defects early!"

MENTAL HYGIENE in the CLASSROOM

(Continued from page 458)

nologists say that truants constitute one of the principal sources of delinquency and crime.

Teachers have learned from the child guidance movement that withdrawing behavior, such as unsocialness, is more likely to interfere with the future efficiency of an individual than aggressive behavior.

Teachers are suspicious of any extreme form of conduct. If a child is too quiet, too noisy or finds an excessive number of excuses for keeping blame and responsibility away from himself, the modern teacher feels justified in making as detailed a study as circumstances allow in order to find causes of his trouble and to prevent future difficulty. Such a teacher tries to help the child who daydreams excessively, who blames others too often, who finds too many "logical" reasons for emotional behavior, who fights excessively or who is exceedingly restless.

Since prevention is easier than cure, it is much easier to make the right start in teaching reading than to correct the situation after the child has become the victim of emotional blocking and other handicaps. The new tendency is not to attempt reading with children until they have attained the approximate mental age of 6½ years and have as a foundation a basic experience, plus a good vocabulary, plus a strong desire to read. Much preventive work can be accomplished through working with the group as a whole. One way for all the children in the class to be prepared for life is by means of wholesome living in the classroom. Many psychiatrists and progressive educators are agreed that the best "ammunition" which a child can take with him to the "front line trenches" is an integrated personality.

The modern teacher regards responsibility as one of the ways by which boys and girls are helped toward integration. Children often take their responsibilities seriously. For instance, a fifth grade girl, named Helen, was taken by her father to a physician. At the end of the visit the physician asked the father to bring Helen back on the following Wednesday at 9:30. The girl immediately said she could not come at that time, because she was chairman of the map committee of her class and that was the time when she was to make a report.

Children are greatly influenced by the "public opinion" of their class. The wise teacher tries to set the stage so that this influence on the individual is constructive rather than destructive. The influence of group opinion can be judged by an incident related by Hartshorne, of Yale University. He told of a boy who did not hesitate to steal after school hours but wept because a classmate cheated. The code of the class was against cheating in school but made no reference to stealing after school hours.

A foundation for a program in "tolerance" is the democratic spirit actually felt by the pupils themselves. The modern classroom is a workshop in democratic living. An important principle in a democracy, whether in a country, state or classroom, is that every person is considered important and is allowed to develop his powers, and at the same time he regards it as a privilege to work for the common good. The teacher, in such a class, makes a constant search for the abilities and talents of every child in order to be able to harness the aptitudes of all. No child is forced beyond his capacity. Each is encouraged to develop the self confidence which will carry him through the ordinary problems of the present and the future. Tensions and pressure have been eliminated, for they aggravate rather than alleviate the troubles of children. In order to remove tensions and to develop good will, teachers who do not have the activity program allow children to vote for some officer, for some project or some trip; or they arrange for a party or a class club. They believe that relief from tension comes when the children are allowed to feel that they have a choice in the management of affairs.

An important feature of the modern classroom is the spirit of play. A teacher in the first grade, at the beginning of the semester, asked her class what the purpose of school was. The reply was, "To play." She asked then what they would like to play. The class voted on playing house. The rest of the semester was devoted to this game. Each row imagined itself as being a family, with a father, mother and children. Their reading and other

(Continued on page 468)

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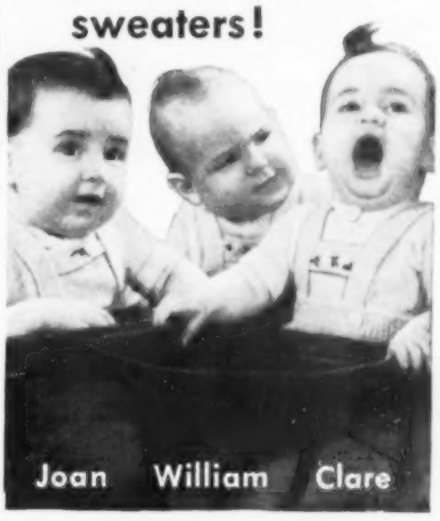

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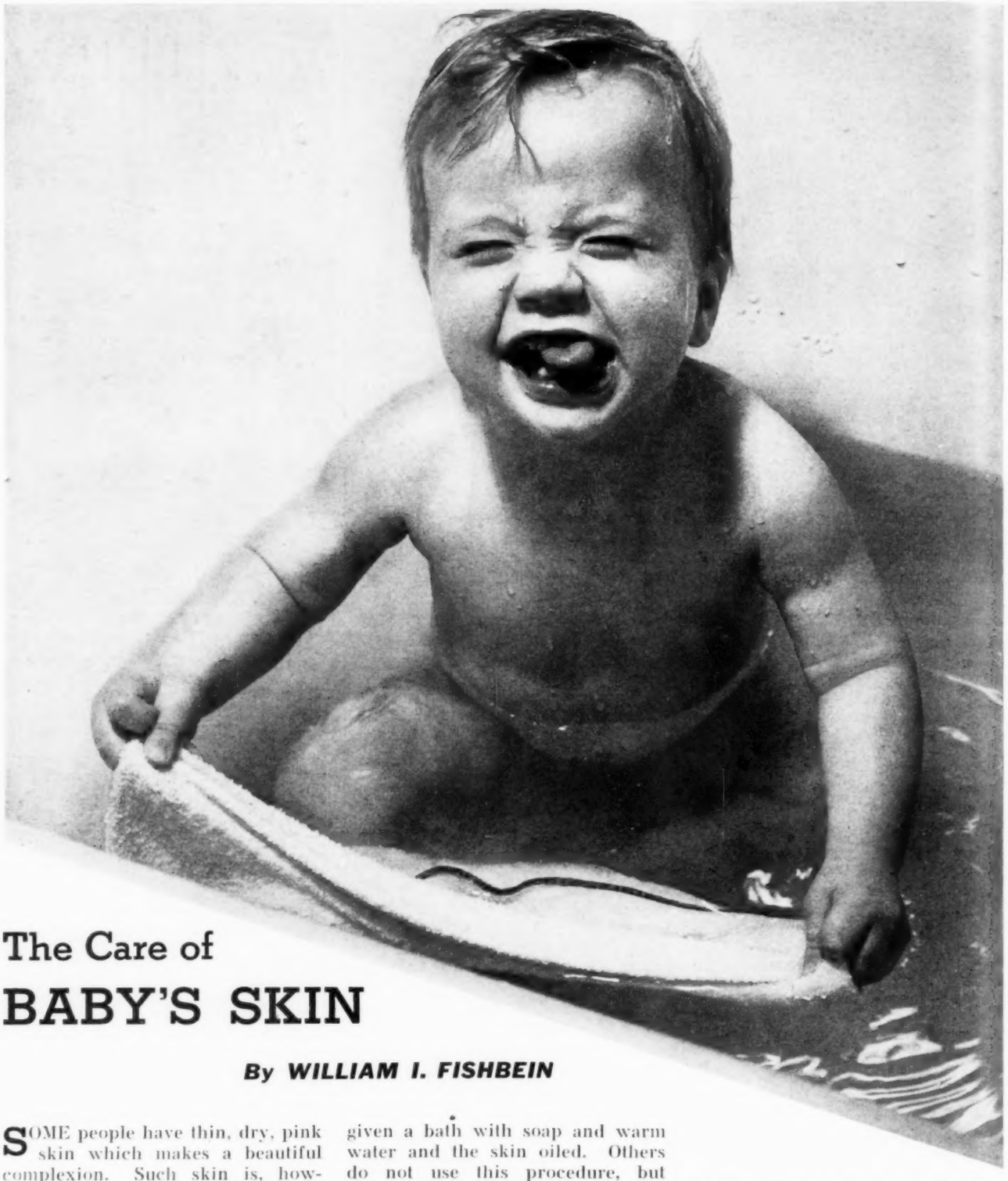

The Care of BABY'S SKIN

By WILLIAM I. FISHBEIN

SOME people have thin, dry, pink skin which makes a beautiful complexion. Such skin is, however, usually extremely sensitive, and irritation easily occurs. This is also the case with the skin of the newborn infant. Even the use of a strong soap on the infant's skin may produce redness and inflammation; if the baby's skin is properly cared for, however, it remains free from blemishes.

Some physicians advise that the baby, immediately after birth, be given a bath with soap and warm water and the skin oiled. Others do not use this procedure, but rather suggest cleansing the skin with oil and repeating the oil bath daily for the first several weeks of the infant's life.

The skin of the infant is probably more apt to remain free from infections and eruptions if kept clean by daily bathing of one type or another, that is, either with mild soap and warm water or with oil. Recently, a group of physicians has advocated omission of any bathing or cleansing of the skin of the newborn baby for the first several weeks, or the period during which the infant usually remains in a hospital. They believe that bathing increases the frequency of a common skin disorder known as impetigo.

Impetigo is a highly infectious disease. It is readily conveyed

from one infant to another, often by means of the hands of an attendant. It may become a scourge in an infant nursery. The condition starts as little blisters, which become pustular. The eruption may develop particularly on the parts of the skin covered by the diaper. An infant with this disorder should immediately be separated from other infants in the nursery.

Treatment consists in the use of various antiseptic preparations, including silver nitrate or gentian violet in the proper strength.

Because of the possibility of a generalized infection or kidney infection developing as a result of impetigo, this disorder may be particularly serious in the newborn infant.

As the baby grows older, other types of skin disturbances may ensue. Most common is probably chafing of opposed skin surfaces. While not at all serious, the chafing produces a great deal of discomfort. It is most frequent during summer.

To prevent chafing, mothers must take care to dry the folds and creases of the skin carefully after each bath. Dusting powder may be used in the folds and creases of the skin, but too much of it must be avoided. It is wise to wipe away the excess powder with a clean piece of cotton.

If chafing does occur, the irritated area should be cleansed with soap and water and borated talcum powder or some similar preparation.

Diaper rash may develop in certain infants, which is characterized by redness, scaling and soreness of that part of the skin covered by the diaper. It seems entirely probable that the irritation of the skin occurs because of the formation of ammonia on the diaper. This is a result of the action of a certain germ on substances in the urine, such as urea. Hence, after washing and boiling the diapers, they should be soaked in a boric acid solution to prevent the development of urea-splitting germs. Some authorities believe that a high protein content in the baby's diet may lead to excessive formation of ammonia.

The irritated skin area may be covered with a mild ointment and the diapers changed as soon as they become soiled or wet, in order to hasten the cure.

The buttocks of the infant are quite sensitive and may easily become reddened and irritated, producing great discomfort. To prevent this, after each stool or urination, the buttocks should be cleansed gently with a damp, soft cloth and washed with a warm solution of salt and baking soda, a teaspoon of each to a pint of warm water. The skin should then be gently patted dry, and some physicians suggest the application of a dusting powder. Others advise the use of oils, but that may tend to soften the skin and prolong the irritation.

After the baby is several weeks old, it seems generally agreed that daily bathing, employing mild soap and warm water, is of benefit. Never rub the skin vigorously, however.

In bathing, the baby's body should be well soaped and then all the soap carefully rinsed off. The baby's skin should be patted dry—not rubbed. In most instances, the use of dusting powder after the bath may not be needed. On the other hand, a light application of the powder in the creases and folds of the skin may be helpful in the prevention of chafing, particularly in fat babies.

Furuncles or boils appear on the skin as a result of an infection with the germ known as the staphylococcus. Once a furuncle develops on the infant's skin, it is extremely probable that more will follow. Large numbers of the furuncles may occur, particularly on the scalp. As many as fifty may come at one time.

In certain regions in which the skin is thick, such as the buttocks and the thighs, instead of breaking through to the outside, the infection may spread through the tissues underlying the skin and form a painful abscess.

A boil begins as a small, hard lump in the skin, which is red and tender. In a few days, a yellowish spot occurs in the center of the lump, which indicates that pus has formed in it. At this time, the physician may open the boil, expel the pus and thus permit it to heal.

By keeping the skin clear and avoiding abrasions, chafing and other types of skin eruptions, furunculosis in the newborn infant may be prevented.

Immediately after birth, it may be well to cover the scalp with some ointment, such as petrolatum or cold cream. On the next day, this grease is removed by washing

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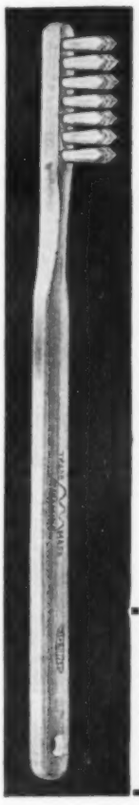

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the scalp with mild soap and warm water, after which the scalp is gently and thoroughly dried. Once daily, the hair should be brushed with a soft brush. As the baby grows older, it may be well to comb the hair gently with a fine-tooth comb, taking care not to tear open the skin. Neglecting to cleanse the scalp may lead to a type of skin disorder called cradle cap.

Cradle cap consists of a crust composed of the dried products of the sweat and oil glands of the scalp mixed with débris and dirt. There are some who consider cradle cap a mild form of eczema. Usually, when this crust develops, it is best removed by using some ointment on the head for several days, at the end of which time the scalp is soaped, cleansed and the crust gently removed by combing. The physician will often advise some stimulating ointment, which will aid in preventing the recurrence of the crust.

The skin of the infant properly cared for is attractive, but improper care may lead to infections and other disturbances which not only detract from the infant's appearance but constitute an actual danger to his well being.

MENTAL HYGIENE in the CLASSROOM

(Continued from page 465)

"work" were built around the milkman, the postman and other individuals who made contacts with their homes in real life.

This first grade teacher was beginning to experiment with the activity program. This experiment is being carried on in New York City with almost 100,000 children. If it is successful, the board of education may gradually extend it over a period of ten years to all schools. These classes integrate their work for the semester by a variety of types of theme, including these three:

1. Making real and imaginary trips. Classes are being taken to see things all over the city. Numbers of classes are making imaginary visits to other sections of this country and to other lands. One class, for example, made an interesting study of South America through identifying itself with an aviator who became lost in the Amazon region.

2. Studying people. Classes have studied Indians, Pilgrims and various groups. Some have started out to study the races of man.

3. Studying things. In this group the following may be placed: How things grow, food, deep sea life and transportation.

The activity program and other modern procedures differ from traditional methods in at least two ways: The new system substitutes first hand experience for excessive verbalism; it substitutes individual and group cooperation for individualistic competition.

Whether the school is using the activity program, or any other system, the most powerful agent in the classroom, for good or ill, is the teacher herself. It takes an adjusted teacher to help the maladjusted child.

The successful teacher is one who sets the example in the ability to adjust to various problems of life. She does her best in spite of criticism and hardships. She refuses to resort to excuses, alibis and subterfuges. She studies human nature and herself. She realizes that if she is frightened, the fear may express itself in aggressive behavior toward her pupils. She works off her feeling of hostility and stubbornness in connection with worthwhile movements. She lives in the outside world so fully that she is capable of encouraging a relaxed atmosphere in her class. She maintains a balanced program of work, recreation and rest. She emphasizes the importance of each day and does not fret unduly about the future. She likes all kinds of persons, and she is interested in children as growing personalities. She constantly revises her attitudes and is not shocked by new ideas, by new principles or teaching, by the antics of her pupils or by any confession which she hears from a wayward child.

The Editor of HYGEIA *announces that hereafter contributors will be paid for their manuscripts on date of their acceptance, instead of on publication.*

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The FRIENDLY TEACHER

By J. MACE ANDRESS

It was a caricature of the teacher and was immediately recognized as such by him. He carried it off to his desk and requested the boy to see him after school.

THE animosity between the teacher and his pupils is traditional. Prof. E. J. Swift in his "Mind in the Making" says, "It is not very long ago, as history measures time, that a Suabian [Bavarian] schoolmaster pointed with pride to fifty-one years of teaching. He had given 911,500 canings, 121,000 floggings, 209,000 custodes, 126,000 tips with the ruler, 10,200 boxes on the ear, and 22,700 tasks by heart." It is also recorded to his credit that he had made 700 boys stand on peas, 6,000 to wear the fool's cap and 17,000 hold the rod. In 1844 the Boston Survey Committee found the floggings in a representative school to average 65 per day for 400 children. Most persons are familiar with one or more of the twenty-eight schools so vividly described by Dickens. It is easy to believe that their brutality was essentially typical for that day. In the days of Horace Mann, life and death struggles took place in the old "Deestrict" schools. During the winter months when the big boys went to school it took real pluck to teach. One recalls Dr. Holmes' description of the gladiatorial combat in which the master routed the combined forces of Abijah Weeks, the butcher's son and his "Yallah" dog. In 1837 more than 300 schools in Massachusetts were broken up by the subordination of the pupils.

Gradually this enmity between pupils and teachers diminished. The belief that children were born in sin and in need of total reformation gave way to a sounder psychologic theory based on a scientific study of children. The introduction of more attractive methods of teaching also helped to tone down the discipline and improve friendly relations between the two camps.

It is pleasant to note that the bestial punishment of bygone days has almost entirely disappeared. But W. Carson Ryan, who made a

wide investigation of American schools to find out the extent to which mental hygiene had definitely taken hold, recently found that although friendliness "would seem to be one of those obtainable and obviously desirable conditions for any enterprise having to do with mental health . . . the visitor finds it in shockingly few places where he visits."

Probably there is more of this friendly association between pupils and teachers in America than in any other part of the world. Exchange teachers in secondary schools from abroad have been astounded by the lack of ceremony, routine and formal order in our public schools. Often they have remained long enough in America to realize the worth of this informality and its genuineness. This new continent of teacher-pupil friendship would still seem to be an unexplored country where teachers may know their pupils better and enjoy their fellowship. More and more mental hygienists are beginning to realize the value of a friendly sympathetic attitude. Real love and affection provide protection, security and guidance so necessary for the growing child. Insights thus obtainable make it possible to get a better understanding of boys and girls and their emotional problems, for formal education seldom comes to grips with the needs of developing personalities.

It is probable that most, if not all, good teachers have made their progress on the elevation of friendliness. This is a case in point. Many years ago, a tall, raw boned but good looking man was teaching in an Indiana rural school. One recess this new teacher found a tough gang of boys looking at a picture which one of them had drawn on a slate. It was a caricature of the teacher and was immediately recognized as such by him. He carried it off to his desk with the request that the boy see him after school. At the close of the day after the last pupil had slowly departed and the boy stood rather defiantly before his teacher, the latter looked up at him from the slate with a smile and said to the boy's astonishment, "That's good, Jim." In the days that followed, the teacher loaned him many books and encouraged him to draw. The man and the boy became fast friends. The name of the boy was James Whitcomb Riley.

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Instilling confidence in children is an aim of the good teacher.

TEACHING with a PURPOSE

By CHARLES R. FOSTER

Are your pupils actually practicing mental health in your classroom? Are they improving in their attitudes? Are they developing in personality? Are they getting a fresh and better grip on life? Is mental health more important than the mere acquisition of knowledge and mechanical skills? Does the teacher directly and indirectly, consciously and unconsciously teach mental health? These are some of the questions considered by Professor Foster of Rutgers University. You will enjoy looking into a few classrooms with him.

WHAT is the yield of a day's work in the classroom? So many words learned? One new operation in arithmetic explained? Ten per cent added to the frieze on the wall? Five more pages covered in the history textbook?

How easy it would be to measure the day's happenings in terms like these!

But how difficult to measure what happens to the pupils' attitudes, to their personalities, to their outlook on life! Of course each day's work at school should yield some knowledge. It should also yield some skills, and the pupils should be a degree more competent than they were when the morning "late bell" rang.

But it is more important that they gain the "unmeasurable" things just mentioned. A little increase in confidence, a little gain in sympathy and understanding, some sense of joy in what the day has brought forth: These are more important values, because the sum of them, when the child's school career is over, will be a better frame of mind with which to face the world.

Let us examine a few typical classroom happenings with this in mind. Mental hygiene tells us that we want the child to grow in confidence. We want him to believe in himself, and in the measure that he does he will be able to face the difficulties in everyday living. What, then, might be the result of the following occurrence? A class is reading aloud; the pupils have written short compositions on their vacation experiences. Robert is asked to read his paper. He begins:

ROBERT: During my vacation we—

TEACHER: Who is *we*, Robert?

ROBERT: We is my father and mother and me.

TEACHER: Should Robert say "*We is*," class?

CLASS: No!

TEACHER: Go on, Robert.

ROBERT: During my vacation we all went for a trip in—

TEACHER: Robert, do you go *for* a trip or *on* a trip?

ROBERT: Well—

TEACHER: You go *on* a trip. Go ahead with your report.

ROBERT: . . . we all went *on* a trip in our auto. We went to Philadelphia first after we crossed the river—

TEACHER: What river, Robert?

ROBERT: The Delaware River.

TEACHER: Don't you think it would be better if you said so?

ROBERT: I guess so.

TEACHER: How many of you have been across the Delaware River, class? (A number of hands go up.)

TEACHER: Very well, go on, Robert.

ROBERT: . . . we crossed the river —the Delaware River—over to Pennsylvania.

TEACHER: You wouldn't need the "over," just say "to Pennsylvania."

ROBERT: . . . to Pennsylvania. Then we went to a place called Lancaster.

TEACHER: Did you stop in Philadelphia?

ROBERT: Only to see some old buildings.

TEACHER: What did you see?

And so on. There is no need to continue with Robert's report. With all the interruptions ahead, it would take too long. The question is, can such a procedure give a youngster confidence in himself? He will probably "bog down" before he is through for "taking too long" to give the report.

This will not happen when a teacher is aware of the fact that one of her aims is to give the child confidence. It is only when she is thinking of the form, consistency, wording or completeness of the report, to the exclusion of the child, that she will make such mistakes in handling a youngster. The number of interruptions to which children are subjected in their work, interruptions in the form of corrections, is great in many classrooms. Corrections must be made, but they can be made tactfully when the child has completed his participation. He then feels that the teacher and the group were interested in what he had to say and not merely in how he said it.

In a class of older pupils, I recently noticed a boy who gave the impression of being a "wise guy." When the teacher asked him if he had a certain book with him, he said, "Nope," in a gruff and surly manner. When she inquired of him as to the reason, he answered, "Didn't know we had to have 'em," and then he added, "don't see why we need 'em, anyway."

The teacher spoke courteously to him and explained the purpose, then went on with her work. It was evident to the observer that during this episode the boy "half" looked around to see whether the other pupils were noticing what he probably thought to himself represented independence and manliness.

It might be that the teacher's manner of treatment—meeting surliness with courtesy—would be effective in some cases; but it would be desirable to "check up" on this boy. Good mental hygiene would not allow a boy to "get away with" this type of behavior. If we are to teach young men and women how to get along with other persons, surely this young man is failing to learn his lesson. Manners of discourtesy can hardly be expected to help him get along "in life."

We may assume that no older boy would react in this manner unless he felt, for one reason or another, some dissatisfaction with the way "things were going." People cooperate when they are basically satisfied and balk if they aren't.

There is just one further note of caution relative to the incident. The boy's reaction might be entirely "out of character" for him. Human beings are all likely to be obstreperous at times. The incident only assumes significance if it is typical, or characteristic, of the boy's behavior.

In addition to the factor of confidence involved in the first incident mentioned, and that of learning how to get along with people involved in the second, the importance of "having a purpose" can be readily noted in any classroom. When children have something to do which they recognize is worth doing, they display everything that the psychologist means when he uses the term "integration."

In another situation which recently came to my attention, some pupils were working on "formal grammar." This, alas, consisted of reading aloud certain sentence structures and then explaining why they were "right." After this had been going on for about half an hour, the teacher (who had a friendly manner) asked, "Do you enjoy doing this work?"

The answer came with unanimity and in volume:

"No!"

Clearly, the pupils saw no purpose in what they were doing. If it had been necessary for them to defend a certain choice of grammar in an article they themselves had prepared for the school paper, how eagerly they would have gone about it! As it was, they spent a listless half hour coming to attention only as individuals when called on to recite.

This does not mean that pupils should not be expected to work. We will not find them insisting that a thing be easy. But they do want it to have some meaning, or value, which they themselves can see. Then they will have a purpose, will accept it and move ahead with unity and control.

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A STUDY of WATER

By EFFIE F. KNOWLTON

Once more, this trained health educator reports on a visit through the schools of Binghamton, N. Y. This time she tells us about an interesting unit of work on water and the general health.

THE unit of work here outlined has unfolded in the Daniel S. Dickinson Open-Air School in Binghamton, N. Y. Miss Mary Lennox, teacher in charge, has guided the development of the unit, and the participating group consists of children from grades four through eight. Inasmuch as the work of the Open-Air School is not finely graded, such a unit as this, it seems, might be equally appropriate for groups of older children in rural schools.

The children's special study of water followed a social-studies discussion of environmental factors essential to man's life, development and progress—air, water, shelter, fire and light. Children remarked that most of the things they already knew about water had to do chiefly with its uses; this observation led them to group those uses or functions which contribute to personal and community health, recreation and safety.

From this approach, the children launched into a more detailed study of this substance in which they had found a common interest. When they and their teacher discussed ways of learning about water, these sources of information were recognized and listed: books (particularly textbooks and reference books in hygiene and social studies), newspapers and magazines, illustrations, charts, maps, slides, motion pictures, models, field trips, speakers (as from the city water works), experiments. The children soon were ready for an investigation which has led into a study of water in its relation to man and his development as an individual and as a member of society.

Inasmuch as the teacher had definite health objectives in mind, the health aspects of this study became a fairly complete and well organized unit of work dealing with water in relation to personal and community health.

Miss Lennox contributes this list of general health objectives which she held in mind during the progress of the project:

1. To help children realize the tremendous role water plays in our health and welfare.
2. To broaden children's horizons and give them an interest in problems related to civic welfare.
3. To provide a new source for leisure-time interests.
4. To develop a cooperative spirit and an appreciation of the contributions of others.
5. To help develop a realization that public health is a matter of vital concern to each of us.
6. To guide children in the formation or reinforcement of desirable habits in the use of water.

More specifically, the teacher aimed to show how a large "interest-area" can have a vital role in all subjects; her purpose was to help children see the relation between government and health measures which are necessary to provide an adequate supply of good water; she planned, also, to help children understand the relation of water to our bodies, in nutrition and in external and internal cleanliness; furthermore, she aimed to help children become aware of polluted waters and of water-borne diseases, to realize the danger of drinking water not known to be pure when on hikes or camping trips and to know why epidemics of certain diseases occur during floods and wars.

The everyday experiences and contacts with water led naturally into research for group discussions, for charts and for reports; checking pictures for information; taking notes for reports and organizing material; discussing Binghamton's water supply; making a group report on water in personal and community health; making charts, models and pictures and using these in discussion and review; collecting pictures to illustrate points to be clarified in discussion of floods and epidemics; examining microscope slides set up by the biology department; studying stereoscopic and motion pictures; making models in metal trays of springs, wells, reservoirs and aqueducts; listening to lectures, and practicing the healthful use of water in daily living at school, at home and in the community.

First group reports were on water supplies of long ago. During subsequent hygiene periods, the children, under pupil leadership and teacher guidance, built up a considerable amount of reference material, some of which has been reproduced for the classbook "Water." All members of the group participated in informal discussions, some reporting on readings while others reported personal experiences or observations. Interest was shown in such topics as these: sources of water; qualities of pure water; a safe water supply in city and in country; interpretation of "We can't take safety for granted"; cost in money of safe water in Binghamton; reservoirs, standpipes, water mains, service pipes; methods of filtration—home and public; water purification; chlorine treatment; boiling water not known to be safe; waste of water; water-borne diseases; reduction in typhoid rates; the schools' responsibility in providing safe water, individual drinking cups or fountains of approved type and in teaching children the correct use of these, and the values and uses of water in personal hygiene.

Obviously the knowledge acquired as a result of this unit varied as the children vary in age, physical capacity, intelligence, mental development and application.

Unfortunately, few results in terms of behavior can be measured accurately. However, the informal "family life" of the open-air schools provides an excellent opportunity to observe improved behavior. The children in the open-air schools habitually wash their hands before eating and after toilet; they brush their teeth after noonday lunch; they use hot soapy water for washing dishes and clear hot water for rinsing them; they observe and practice simple cookery; they use the drinking fountain correctly; each child has his individually marked belongings, and each knows that the extra garments and blankets provided by the school are laundered and sterilized periodically.

These and other habits and practices involving the use of water have taken on new meanings as a result of this unit of work. Teachers have noted in the participating children a genuine awareness of the health values of water—an awareness accompanied by deepened appreciations of the indispensability of water in the health, the welfare and the life of boys and girls.

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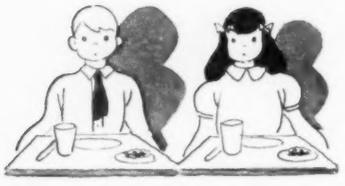
A LUNCH PROJECT that WORKS

By ADA M. COCKEFAIR



A unique banquet stimulated major health activities of the West Junior High School at Madison, Wis. Mrs. Cockefair is not only a teacher of health and science but also the co-author of an excellent high school textbook on health.

NINE years ago the principal of West Junior High School at Madison, Wis., observed that a large percentage of children bought highly carbohydrate lunches at the school cafeteria. A project was devised to correct the situation. It became known as the "A" Lunch Project, "A" indicating adequate. In the past ten years this project has grown steadily in popularity and has evolved as a major school activity. Its influence affects not only the 750 children within the school but reaches out into the children's homes. Parents frequently mention that their Jimmie, who formerly ate green vegetables only under stress, would declare after a short study of foods, "We should have more green vegetables, Mother." Or frequently a parent would comment, "I don't see how you do it. I have never succeeded in getting any of my children to eat green vegetables until they reach ninth grade. Then the 'A' Lunch Project comes along and suddenly they begin to call for green vegetables and like them."

From the beginning of the project, it was evident that it was not enough to learn what makes a balanced meal. There is no assurance that this information will be put into practice. If the youngsters have food prejudices, and most of them have, there needs to be an incentive to get them to eat balanced lunches. Since we are all creatures of habit, it was hoped that after six weeks of choosing balanced lunches, there would be a habit formed which would carry over in a large percentage of the cases.

A contest scheme was devised to meet this situation. The lunches of all children in junior high who desire to enter the contest are checked for a period of six weeks. About one week after the six week checking is ended, the 200 children choosing the highest number of "A" lunches are invited to a banquet as guests of the school.

The first year of our venture we made this offer only to the children who ate in the cafeteria, but the children who ate lunch at home felt so discriminated against that the plan was altered to permit parents of those who ate their lunches at home to do the checking. Directions were sent home for the checking, together with blanks for the parent to fill out each day, sign and return each week. Though we reluctantly devised this plan, fearing deceit, we came to the realization later that we chose more wisely than we knew. A closer cooperation between the home and the school was established through the project. We found, too, we were not just influencing one child alone but often the whole family.

The project centers around a ninth grade semester's course in physiology and health, which is a combination of functional physiology and hygiene. After about nine weeks of study of the unit, "Where Life Gets Its Energy," which includes a study of the source of energy, how foods are classified, the vitamins, how foods are digested, milk and achievement and the choice of food, many ninth grade students are capable of checking trays for balanced meals.

To make the enterprise a school activity, a Physiology Club is organized early in the semester and assumes full responsibility. The club is composed of about fifty capable students from the physiology classes. One of the physiology instructors is advisor of the club. The first function of the club is to get publicity. The art and speech departments are now called into service. A dozen or more posters are prepared and placed in conspicuous places in the halls. A boy and a girl are selected to make assembly speeches, one to explain the nature of an "A" Lunch and the checking system, the other to make a booster speech extolling the fun to be had at the banquet as well as other values of the enterprise.

Checking begins on the Monday following the announcement. The students who have their lunches in the cafeteria pass by checkers who glance at their trays. If the meal is a balanced one, a card is placed on the tray. On one side the card reads, "You have an 'A' Lunch." The other side explains what an "A" Lunch is. This explanation is valuable for seventh and eighth grade students. These cards are taken at once to recorders.

The records of students who have lunches at home are collected each Monday by a member of his homeroom, and these in turn are collected by recorders and filed. This keeping of records requires a great deal of bookkeeping, which is all done by students. The club is a bee-hive of activity, with checkers, recorders and publicity and program committees all conscious of their responsibility for the success of the enterprise.

The project is made a tangible reality by a rat feeding experiment, which is made coincident with the study of foods. It is a source of much pleasure to the class to watch the growth of these four rats that are received at the age of 28 days and to find suitable names for them. Choice usually runs to euphony; Eni-Meny-Miny-Mo started the custom. Then came Fe-Fi-Fo-Fum, Hinky-Dinky-Parlez-Vous, Grumpy-Bashful-Sneezy-Doc and Strawberry-Raspberry and Lemon-and-Lime. On the day of their arrival, announcement is made that the rats will be named one week hence. Names are to be submitted to the secretary of the club. On the set day the names are read, and vote is taken.

In the assembly announcement, it is explained that the metabolism of rats is so watched that they serve as a microscope on nutrition. A 3 year

old rat has an equivalent metabolism of a 90 year old man, and one week in a young rat's life shows developments equivalent to thirty weeks in a child. Thus time is telescoped, and the influence of food is magnified. To avoid confusion, only one food lesson is attempted in this experiment. During the first week all four rats are given a complete diet including milk. The two heaviest rats are then deprived of milk, and coffee is substituted, the other food remaining the same. In a few days the weights are reversed. Milk is now restored and the second pair given the substitute. This can continue with dependable results as long as the experiment is desired. This type of experiment is chosen because many children are found to be prejudiced against milk with a well established taste for coffee. No preaching need be done. The observing student draws his own conclusions.

It is gratifying to note over the ten year period the marked improvement in the percentage of children drinking milk for lunch. Milk was not the usual choice ten years ago. It certainly is now. Now there are many whole tables where every child has a bottle of milk. Many of those who bring all their lunch from home bring milk. If they have no bottle suitable, they use salad dressing jars. These children quickly discover that a raw carrot will take the place of a salad. The number of raw carrots consumed in the cafeteria is amazing. During the course of this project, the student becomes conscious of three things: milk, fruit and green vegetables.

As for the cost, our principal and P.-T.A. take the responsibility for raising the money. Expenses last year for food amounted to $95. That was the only cost. The flowers are lavishly furnished by students and parents. Each year many parents keep choice flowers for the occasion. The art department assumes the responsibility for arranging these flowers in bouquets and takes entire charge of the table decoration. The place cards and folders for programs are made by the art department and are suggestive of "A" Lunches.

This past year 450 students entered the project. If records of children eating at home are not brought in on Monday, they are discounted one point for each day late. Promptness is at a premium, for last year we had 195 perfect records. A single case will illustrate. Two years ago one of the seventh grade children of a wealthy family wearied after the first week of bringing his record in. A week before the banquet he asked his homeroom teacher if he would be allowed to buy a ticket. He said he would even be willing to pay twice the cost. His homeroom teacher assured him there were some things money could not buy, and this was one of those things. She told him this was something one would have to earn. He learned his lesson. The two following years he was at the banquet.

This project furnishes a large number of opportunities for giving responsibilities to students. Children crave responsibility and greatly develop thereby. It is amazing how they rise to any situation. The poise of the toastmaster or toastmistress and the one who gives the speech of acknowledgement is little short of marvelous. Thirty-five little seventh grade Home Economics girls are trained to set the tables and serve the dinner. Ninety hosts and hostesses from the ninth grade, a pair for each of the forty-five adult guests (mainly teachers), are trained for the occasion by the Home Economics department and well fulfil their responsibility.

A unique feature of the banquet is that no adults are on the program. Only children sit at the speakers' table. The toastmaster or toastmistress is chosen by the Physiology Club. If a boy is chosen, it is the custom that the sexes share honors, and a girl is then selected to give the speech of acknowledgement. The musical numbers are planned by the music department, and during the dinner a small school orchestra plays chamber music. The menu bears out the idea of balance and artistic taste. A bottle of milk is at every plate. Not even adult guests are served coffee.

The "A" lunch banquet is anticipated as the great event of the school year. For many children, especially the underprivileged, it is their first glimpse of a real banquet, and foundations are laid for ambitions. It is wholly their own affair, as beautiful and sparkling and as significant as the grown-up banquets they read of in history and in newspapers. It is the children's rich reward for intelligent industry and cooperative endeavor.

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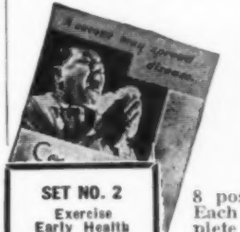

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INDEX
to HYGEIA
ADVERTISEMENTS

Allcock Mfg. Co. (Manicare)... 455
American Institute of Baking... 443
Beverly Farm, Inc..... 477
Camp, S. H. & Co..... 469
Child Welfare Guild..... 468
Church & Dwight Company..... 461
Church Grape Juice Co..... 446
General Electric Co.....2nd cover
General Foods Corporation..... 448
General Mills, Inc.....3rd cover
Hansen's Chr., Lab., Inc..... 447
Hawaiian Pineapple Co., Ltd.... 445
Hurff, Edgar F..... 447
Hynson, Westcott & Dunning, Inc.....Back cover
Kolynos Company..... 439
La Loma Feliz..... 477
Lever Brothers Company..... 465
Lippincott, J. B. Co., Inc..... 457
Luzier's Inc..... 451
Maiden Form Brassiere..... 475
Mangels-Herold Co., Inc..... 446
Mead Johnson & Company..... 385
Metropolitan Life Insur. Co..... 440
Moran Shoe Company..... 468
National Assn. of Chewing Gum Manufacturers 473
National Pressure Cooker Co... 449
Num Specialty Co..... 467
Phillips, Dr. P., Canning Co..... 446
Pogue School, Mary E., The.... 477
Scott Paper Co..... 471
Squibb, E. R. & Son..... 387
Sun-Rayed Company..... 446
Takamine Corporation..... 467
Tampax Incorporated..... 479
Taylor, Frank F., Co..... 462
Tre-Zur Brassiere Co..... 455
Trowbridge Training School.... 477
Van Camp Sea Food Co., Inc... 446
Venus Corporation..... 462
Vischer Products Company..... 442
Walthers, W. K., Inc..... 453
Wilson Schools..... 477

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DEADLY DISEASE NUMBER 4 (Continued from page 414)

also gage the degree of the kidney's inability to effect the usual elimination of waste products from the body. This information gives the physician important clues, not only for dietary treatment and the administration of fluid but also for special medications which may control the associated dangers, such as acidosis.

The human kidney looks much like that of the sheep or veal with which we are all familiar, except that it is a little larger. The kidneys are attached near the spine high up in the abdominal region behind the stomach. They are bean shaped masses, made up of 2 million tiny grapelike clumps of specialized blood vessels [glomeruli]. A cuplike covering surrounds each tiny vessel clump and empties like a funnel into a small coiled tube which finally empties into a larger collecting space called the kidney pelvis. Urine is formed as the blood enters those minute grapelike masses under pressure. It must escape from the clump through a vessel that is only one-seventh to one-ninth the size of the one by which it entered. Like a wine press, this produces a wringing or squeezing from the blood of much of its liquid and certain dissolved parts. This filtered liquid averages approximately 150 quarts a day. This squeezed out fluid is then caught in the little funnel and passed down the tube toward the kidney pelvis. This tremendous amount of filtrate is reabsorbed into the blood through specialized cells which line these 2 million tubes, leaving a residual of about three pints that is passed on to the bladder as urine. This hundredfold concentration that is effected by the kidney tubes is delicately controlled, because of the human body's need for accurate water balance. The efficiency of reabsorbing the water into the body, eliminating most of the undesirable waste products, gives the resultant urine its characteristic color, odor and saltiness. Owing to the magnitude and delicate nature of this function, it is indeed surprising that this combination of filtration and reabsorption does not get out of balance more frequently than it does. A specific germ infection in the body is required to destroy these structures, and this results in the toxicity and acidosis experienced in the various forms of Bright's disease. Certain additional tests have been devised which measure the extent of this damage, which are called kidney function tests. These tests apply to the later stages of glomerulo-nephritis when they serve to guide the dietary and medical management, just as the blood chemistry was the best guide in the acute stage.

Acute Bright's disease has been commonly regarded as a most serious and generally hopeless disorder. This is far from the truth. Acute glomerulo-nephritis, like other acute diseases of the human body, tends to subside. Approximately 90 per cent of all cases of acute glomerulo-nephritis recover completely if recognized early and if properly treated; the remaining 10 per cent continue to show albumin, red blood cells and granular casts in the urine, indicating that the disease persists. If such conditions persist over a few months' time, the patient is regarded as having passed from the acute into the so-called chronic stage.

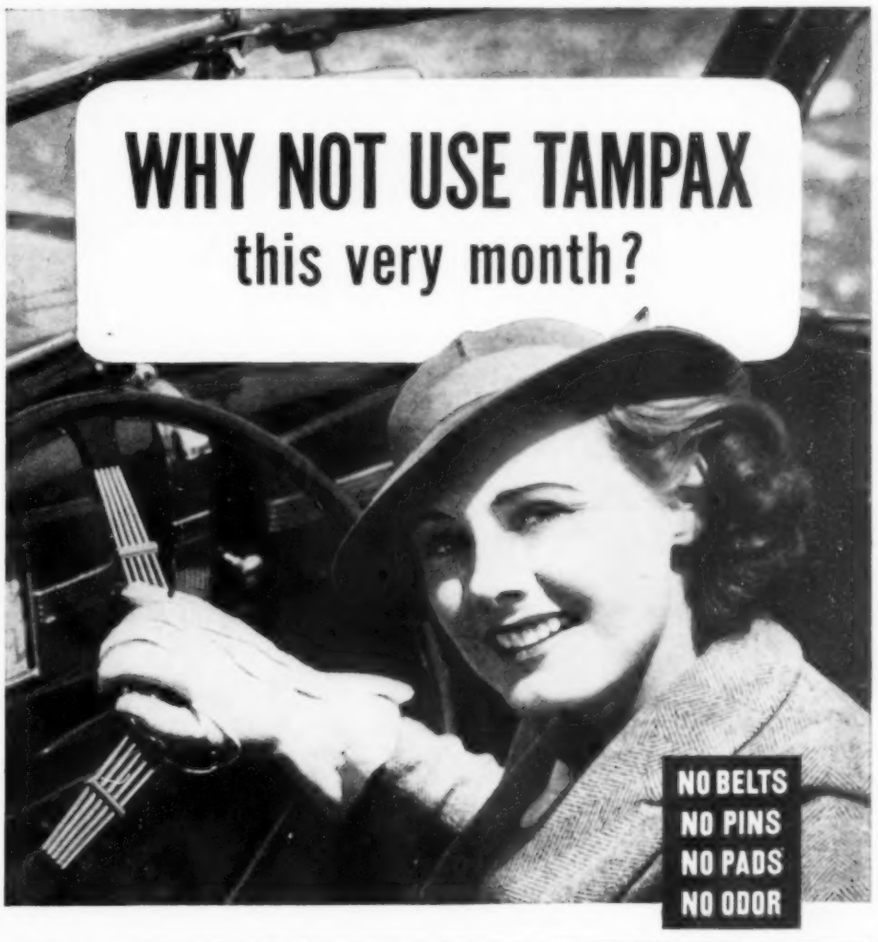
When one suffers from acute nephritis, he should remain quietly in bed under good hygienic conditions with a carefully supervised diet and fluid supply until the trouble with the kidney has entirely subsided. The best gage of the recovery is the disappearance from the urine of all albumin, red cells and casts. Such a period of treatment may require only three or four weeks, or it may extend to six months or a year. The diet should be high in carbohydrates, fats and vitamin substances. It will be essentially free of meat in the early days of the acute attack because the inflamed kidney cannot pass the waste products of proteins through into the urine. Further, meat contains phosphorus which is frequently retained in the body with its own serious influence. The physician may wish to give large amounts of calcium at such a time to keep phosphorus from being absorbed into the body and likewise to combat the associated acidosis. While the rest and diet period is going on, careful search for the infection which caused the disease should be made. If active infection is present in the body at this time, great caution must be

exercised by the physician in his treatment.

Recently, there has been a most gratifying and definite reduction in the incidence of acute glomerulo-nephritis. Several factors contribute to this decrease in human suffering. The public has an increased appreciation of the importance of infections. The common cold, the streptococcus sore throat and allied conditions are receiving earlier and better treatment. The great reduction in the incidence and the better treatment of scarlet fever are making their contributions. The better understanding and improved care of nose, throat and tonsil conditions early in life have reduced the opportunity for invasion by germs. Improved living conditions, in regard to home heating and decreased spread of infection from one to the other in close living quarters, are noteworthy. Great strides made in the planning of balanced diets including the vitamin substances are resulting in the improved resistance against all types of infection. New advances in the better understanding of bacteriology and the development of new drugs for the treatment of streptococcus infections offer much in the prevention of glomerulo-nephritis, even after the streptococcus has invaded the body. Although the process by which acute glomerulo-nephritis is initiated in the human body is not clearly understood, great inroads have been made on its incidence and its resulting mortality by the fundamentals of prevention and carefully controlled medical management.

THE USES OF PROCAINE

In addition to its value as a local anesthetic, procaine hydrochloride has proved beneficial in the treatment of many disorders, especially acute injuries, Tom Outland, Harrisburg, Pa., and C. R. Hanlon, Sayre, Pa., point out in *The Journal* of the American Medical Association. Fractures which do not require correction and immobilization and in which severe injury to the ligaments is of primary importance respond well to this treatment. In many of the cases cited by the authors a single injection was sufficient to cause prolonged relief of pain.



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Medical News OF THE MONTH

Decreasing Risks of Wound Infections

The installing of x-ray apparatus in establishments for treating wounded soldiers is recommended as an effective emergency means of decreasing infections by P. M. Keating and F. M. Davis in *Military Surgeon.*

They point out that the treatment of war wounds differs from that of civilian injuries in the delay which is usually unavoidable because of evacuating difficulties. Recent use of x-ray apparatus for industrial injuries, which are closely comparable to those received in combat, has shown that such treatment of penetrating, perforating and crushing wounds, given a few hours after they have been received, will perceptibly decrease the percentage of cases infected by gas-forming organisms, as well as by streptococci and staphylococci. Such treatment also helps to promote closing of wounds.

Majority of Epileptics Can Be Helped

Although the exact mechanism of epilepsy is not yet known and no specific cure has yet been found, the majority of persons with the affliction can be either relieved of their symptoms or helped to live a useful life in spite of them, William G. Lennox, Boston, declares in *The Journal* of the American Medical Association.

He points out, however, that proper treatment varies greatly with the individual. "Natural remissions," he adds, "which may come without apparent reason and last for years, are an encouragement to patients but may fill the coffers of 'patent medicine' concerns.

"Phenobarbital (plus other unimportant drugs) sold by a mail order drug concern costs eighteen times as much as undisguised phenobarbital. The poor person who buys treatment by mail because he 'can't afford a doctor' could, with the $50 extra which he pays yearly for the medicine, purchase excellent medical advice."

Discussing the results obtained with dilantin sodium, a comparatively new drug in the treatment of epilepsy, Dr. Lennox says that although it is not a specific it appears to have a definite place in the management of the disease. "If complete arrest of attacks is not secured with a full dosage of dilantin sodium," he suggests, "the addition of moderate amounts of phenobarbital is often beneficial."

Precautions Against Food Poisoning

Any possibility of poisoning from home-canned foods may be avoided by carrying out two simple precautions, the *New England Journal of Medicine* suggests. The first is to destroy all cans of food that show evidence of bulging or which on opening have a rancid odor or slushy appearance or contain gas bubbles. Secondly, all home-canned vegetables should be thoroughly heated to boiling before use.

In view of the rising cost of foodstuffs and the emphasis on conservation of foods that accompanies war, an increase in home canning may be expected. The dangers of food poisoning from this practice therefore require reemphasis, the journal points out.

Although such dangers have been reduced to a minimum in commercial canning, poisoning from home-canned foods is still an important problem. "No kitchen is equipped with the apparatus for sterilization and control of the packing processes to the extent that commercial establishments are," the journal declares.

"Clostridium botulinum (a bacterium responsible for much food poisoning) is a widespread organism and owing to its ability to live without oxygen it grows in air-tight containers. The spores of the bacillus are resistant to heat, and unless a high temperature is maintained over a sufficient period of time to kill them, the organism will begin to grow in the canned food and elaborate toxin.

"There have been over two hundred sporadic outbreaks of botulism (poisoning due to Clostridium botulinum) in this country; most of these have occurred on the West coast, although practically every state has had them. In most instances, the infection has come from canned vegetables, rarely from meat products. This may be due to the greater frequency of vegetable canning in the home. Non-acid foods, such as beans, are more dangerous than tomatoes or other acid vegetables."

Grotesque Positions

It is unlikely that exposure to cold alone could cause freezing to death in grotesque positions, such as those shown recently in photographs of "frozen Russian soldiers," *The Journal* of the American Medical Association says in answer to an inquiry.

The Journal points out, however, that it is possible for the body to stiffen in the position in which it was at the moment of death, should death occur suddenly, for example from a stab wound. Exposure to cold would predispose to such instantaneous stiffening of the body. Under such circumstances the body might be found in a grotesque position, such as kneeling or standing upright. Usually, however, there is something which supports the body in this position.

Heart Disease Among Young People

While a recent report of a decrease in mortality due to heart disease among young people is encouraging, one should remain fully aware of the seriousness of this problem, *The Journal* of the American Medical Association points out in an editorial which states: "Rheumatic heart disease, which for example caused more deaths among persons under 20 years of age in Philadelphia during 1936 than whooping cough, measles, diphtheria, scarlet fever, meningococcic meningitis and infantile paralysis combined during this age period, continues to be particularly worthy of attention."